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THE JOURNAL OF

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Vol. III, No. 7

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Around the Country with J. E. Rogers

The Play House—A Part of Play Day . . . . . Helen Westfall

Physiology at the Service of Physical Education . . . Arthur H Steinhaus

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The Journal of

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E. D. MITCHELL, Editor

Vol. III SEPTEMBER, 1932 No. 7

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FROM THE PREFACE
By **Rebecca J. Coffin**
The Lincoln School of Teachers College
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Special teachers are realizing more and more fully that children are not composed of separate compartments. Dramatic play as a natural means toward physical as well as emotional development has a legitimate place in the "gymnasium period." The body rhythm that naturally accompanies a song does not belong exclusively to the music period, and a "good play" does not necessarily belong in an English period.

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A Broader Concept of Physical Education

By

CHARLES SCOTT BERRY, Ph.D.

Director, Bureau of Special Education
Ohio State University

IN any age the prevailing conception of the relation of the mind to the body determines in large measure the aims and character of the physical education of that period.*

The Athenian Greeks believed that mind and body were one and inseparable, that each influenced the development of the other. No other intellectual and beauty-loving people has ever given to physical education as high a place in their system of education as did the Athenian Greeks.

In the *Republic* Plato says, "Neither are the two arts of music and gymnastics really, as is often supposed, the one for the training of the soul, the other for the training of the body. . . . The teachers of both have in view chiefly the improvement of the soul." It was hard for the Athenian Greek to think of a beautiful spirit existing in any but a beautiful body. Homely Socrates was the anomaly of his age. Almost without exception the great men of Greece were men of magnificent physiques. Greece alone, during the period of the "Golden Age," produced more great men than the whole world combined has produced during any subsequent period of equal length. There can be little doubt that the greatness of the Greeks was due, in some measure at least, to their conception of the relation of the mind to the body as it found expression in physical, aesthetic, and intellectual education.

During the Middle Ages the view of the relation of the mind to the body as held by the Church was in marked contrast to that of the Greeks. Influenced by the ascetic element in Christianity and by oriental thought the Church regarded the body as an evil, as something to be suppressed in order that the spirit might be untrammeled. Hence the practice of asceticism, the crucifixion of the flesh that the spirit might be free. The self-inflicted tortures of the body during that period are almost beyond belief. Needless to say, physical education as such had no place in the system of education approved by the Church.

The period of the Middle Ages has been well named the Dark Ages, the era when man was at war with himself. It is not surprising that for almost 800 years there was little or no progress.

Although the Church's conception of the relation of the mind to the body was tempered by the Renaissance, physical education as such held a lowly place until after the beginning of the modern scientific era.

With the development of modern science the conception of the relation of the mind to the body changed in a marked degree. The old view that the mind was in large measure independent of the body and that the body was evil was supplanted by the view that the relation between the mind and body is most intimate, that for every mental state there is a corresponding brain state, and that in the words of William James "our moods and resolutions are more determined by the condition of our circulation than by our logical grounds."

Physiology has shown the marked influence of the ductless glands in both physical and mental development. Psychiatry has revealed the futility of attempting to submerge or destroy fundamental urges. And behavioristic psychology has directed the attention away from the traditional dualism of mind and body to their essential unity as expressed in behavior.

We now have a sound scientific foundation for a broader and more vital conception of physical education.

If this conception is accepted, the chief aim of physical education becomes the development of the mind through the development of the body rather than merely the development of the body as an end in itself. Thus, in position of importance physical education becomes co-ordinate with, and not subordinate to, so-called academic or intellectual education.

Since feelings and ideas find expression only through muscular activity, obviously the proper development of the muscles of the body is of paramount importance in the education of the individual. The growth of the mind is contingent on muscular activity, the type of activity that makes possible the objectification and intensification of mental states. Physical education fundamentally seeks to make possible the full and free expression of mental states through the development of the body.

BUT in practice what is the meaning of this broader conception, that physical education is chiefly concerned with the development of the mind? In the first place, it means that some of the by-products of physical

*Address given before annual convention of the Mid-West Physical Education Association at Columbus, Ohio, April 1, 1932.

education now become major objectives. The acquisition of strength, endurance and skill ceases to be merely an end in itself but becomes rather a means to the development of certain mental traits. A good illustration of this is found in the changes which have taken place in intercollegiate sports during the past two decades. In football, for example, the rules have been changed repeatedly to make victory depend more on the development of strategy, initiative, resourcefulness, team work, and conformity to the rules; and less on weight, brute strength, and evasion of the rules. A reputation for good sportsmanship is now more highly prized than victory attained by questionable methods.

It is said of one "big ten" football coach that he has done more to develop desirable character traits in players on the football field than any professor has been able to accomplish in the classroom. In fact, we are just beginning to perceive the possibilities of games and sports as a means to the development of those mental traits which are of such vital importance in an age of co-operative effort.

The possibilities of physical education as a means to emotional expression or interpretation are beautifully illustrated in the folk dance. The satisfaction that comes from full participation in this dance is due, not to gesture and rhythm as such, but to the participation in the emotional life of the race which is made possible by the gesture and rhythm. However, to realize the desired end one must know the racial significance, the emotional and ideational background of these dances. Just as history enables one to experience the ideational life of the past, so the folk dance enables him to experience the emotional life of the past.

In games, sports, and folk dancing, the teachers of physical education are now aiming more or less consciously at the development and expression of mental states; but in the physical drills and exercises of the classroom and gymnasium the chief aim seems to be the maintenance or improvement of health. In fact, the term "health education" in many places is used instead of "physical education" to indicate that physical education as such is not an end in itself but rather a means to the improvement of health.

Health, like happiness, can be found only in seeking something else. Health education does not touch the imagination of youth. The drills and exercises which are undertaken solely for health are almost universally disliked. There is no more pathetic figure than the normal individual laboriously working on the pulleys or taking a setting-up drill or running a half mile solely for the sake of his health (unless it is that brute for punishment who conscientiously eats all the foods he dislikes because they are supposed to be good for his health). It is mental, not physical, health that is the major goal and this goal can be attained only by directing the attention of youth to appealing objectives which lead to mental health.

But the objectives must be positive, not negative, if they are to appeal to normal youth. Good posture is most successfully attained by emphasizing the desirable effects of good posture, not by stressing the bad effects of poor posture. In the case of the cadet who desires a fine military bearing, setting-up exercises and military drill quickly yield permanent results. But in the case of the unwilling recruit these same exercises yield results less quickly and the results are seldom permanent.

THUS far our discussion has been confined in large measure to the development and functioning of the fundamental or large muscles in their relation to mental development and to health. As yet the education of the accessory or small muscles has not been regarded as belonging to the field of physical education except in so far as their development was involved in connection with that of the fundamental muscles. The training of the accessory muscles as avenues of expression has either been neglected or left to the teachers of voice, piano, speech, and vocational subjects. It would seem that the basic training of the accessory muscles as muscles of expression belongs in the field of physical education and should take place in connection with the training of the fundamental muscles.

A fine bearing, a pleasant and expressive countenance, ease and grace in movement, muscular and emotional control, well modulated voice, graceful and expressive gestures—these things which so largely condition happiness and success result from the proper training of the accessory muscles.

But if this desired end is to be attained, some changes must be made in the modern gymnasium. Its apparatus—parallel bars, mats, horse, horizontal bar, pulleys, and dumbbells—suggests strenuous physical exercise as an end in itself. One perceives the odor of perspiring bodies but does not feel the breath of the spirit.

IF the chief aim of physical education is to be the improvement of the mind, let us bring into the gymnasium reproductions of the finest in Greek art, hang on the walls pictures representing the human form at its best, pictures portraying in bodily attitude, gesture, and facial expression, the emotions of man, and pictures representative of types of character and temperament. These means, supplemented by the use of the motion picture and instruction by the teacher, acquaint the youth with the possibilities of the human body as a means of expressing and interpreting mental life.

Introduce into the gymnasium large mirrors that the youth may see for himself how he compares with the ideal. Urge him to participate in school dramatics that he may discover to what extent he is able by voice, posture, gesture, and facial expression to express, intensify, and develop his own ideational and affective states.

But to be successful in putting into practice this broader conception of physical education, the teacher himself must experience in thought, feeling, and action that which he would have youth experience through the process of physical education. Only thus can the goal be attained—the freeing of the human spirit to reveal itself to the world through a beautiful, graceful, responsive body.

General View of Exhibitions Showing Project Work of Pupils on Center Tables

Interest and Student Activity in Hygiene Instruction

By

EDWIN H. HASTINGS, Jr.

Chairman, Department of Health Education,
DeWitt Clinton High School, New York City

TWO DECADES ago hygiene as taught in the schools was based largely on physiology textbooks. It was chiefly concerned with naming the bones of the body, tracing the circulation, and describing the process of digestion, together with a study of the functions of the various organs. Physical training was concerned mainly with muscular development through gymnastics and athletics. We have passed through many phases of teaching until, at the present time, we think of health education and physical education as having a common primary objective. While every member of the school staff, from the principal to the custodian, is responsible for the promotion of health, the greatest responsibility is placed on the health education department.

The newer conception of the meaning of learning has greatly influenced the development of health education; that a thing is actually learned only when it changes the

School Custodians' Exhibit—Dealing With Cleaning, Ventilation, Lighting, and Sanitation of the Building

behavior of the individual, makes activity an essential characteristic of health education. Education is no longer defined as preparation for life; we now believe it to be life itself, and that the child will be best prepared for living at some future time if the situation is so arranged that he may live completely and fully now.

With these principles in mind, our first department meeting of the school year was devoted to the discussion of the need for applying the knowledge of hygiene acquired by the students in their daily practices. Are our boys eating an adequate breakfast before coming to school? Are they handicapped by sight or hearing defects known but as yet not corrected? Are they giving immediate care to minor cuts and injuries? Are these and similar laws of hygiene functioning in their daily lives? These were some of the questions asked. It was decided to approach the problem through the medium of class instruction in hygiene, for which all boys above the fourth term are programmed one period a week. Five instructors give full time to class teachings. Several other agencies in the school were to reënforce the classroom teaching.

The school nutritionist, a registered nurse employed by the cafeteria, spends the major part of her time interviewing those students in need of advice regarding their dietary habits; each boy has his own folder containing his weight chart, case history, a study of his diet, and special recommendations for his welfare. The nutritionist works with the hygiene department and sits in at department meetings.

A member of the health education department is a practicing dentist and devotes several periods each day in the dental room. The teeth of almost half the students on the school register are examined each term, and recommendations made according to the findings. Letters are sent to the parents of those boys needing dental work, and in many instances arrangements are made with dental clinics for the work to be done.

Inasmuch as the mind of one person differs from that of another just as the muscles do, our psychological laboratory plays a most important rôle. Cases of maladjustment in school life are referred to a member of the biology department who is also a psychologist. Mental tests are given when indicated; the boy finds a ready and sympathetic listener to his troubles; and as "the first basic rule for healthy mindedness is to face life fairly and squarely," the boy is carefully guided to a solution of his problem either through adjustment within the school or with the assistance of outside agencies. In this laboratory hearing tests on the 4A audiometer are given to all entering students, and, through coöperation with one of the large hospital clinics, eye tests are given to the same group.

The sick or injured students are cared for during school hours in the medical room by the teacher of hygiene and home nursing. In this room each student is seen as an individual and provision is made for individual differences. Many boys come to the room for personal advice and guidance regarding their health; in this phase of the work, as well as in the psychological laboratory, close contact with the home is necessary to achieve desirable results.

Finally each freshman is interested in the need and value of a medical and physical examination, either by

Medical Room. Registered Nurse on Duty Throughout School Day

his family physician or by the school physician; all deviations from the normal are recorded and not only recommended for correction, but in many cases assistance and guidance are given toward that end.

The functioning of these various divisions strengthens the hygiene work and helps to provide the activity necessary in learning.

A very interesting bit of work done by a sixth termer early in the semester, as a result of his study of teeth in the hygiene class, suggested a classroom exhibit which would promote health through visualization and further activity. As the work progressed the boys became so interested and so many were anxious to contribute that we were obliged to plan for larger space to hold the exhibit. The students were guided to understand that the exhibit and the work necessary to promote it and carry it over was theirs. Boys in the biology, general science, and civics departments became interested, and a student from the Latin department asked if he might prepare and contribute a chart giving Latin names used frequently in health work.

Explanation of How We Hear—Ear Defects—Audiometer

Late in January the work of the students was completed, and arranged on tables forming a large hollow square in the center of the gymnasium. Models, charts, scrap books, and other works were submitted, including Petri dishes showing colonies of bacteria growing from cultures exposed in various parts of the school, subways, and parks. The outer circle of the gymnasium depicted the work of the dental room, the medical room, and methods of testing sight and hearing. A very excellent display of fresh foods was presented in groupings of calories, proteins, carbohydrates, fats, minerals, and vitamins. The custodian of the school contributed a notable portrayal of the methods of heating, ventilation, lighting, and cleaning the school, with suggestions showing how the pupils could put some of the knowledge into practice. Exhibits and posters from outside organizations interested in promoting health, from whom we have received assistance in obtaining correction of defects, informed visiting parents and teachers of agencies available in the community.

A Practicing Dentist Is a Member of the Health Education Department. He Examines 3,000 Pupils Each Term.

A guide listing the various exhibits and the location of each was prepared and printed (multigraphed) by the students. Boys of the hygiene department met the visitors at the door and acted as guides; the students were also responsible for the order of the materials, carefully replacing articles after they had been inspected by the visitors.

All the members of the hygiene classes visited the exhibition during the week. Each boy was given the freedom of the room for a full period and it was interesting to note the tables that attracted most attention. But it was not until after the exhibit had terminated and the boys were again in their hygiene classes that the value of the demonstration could be determined. Each boy had had an opportunity to observe and study the work of many other boys from many other classes.

The work on teeth increased interest in dental examinations. Boys who had observed the excellent models of the eye and ear and the methods of testing hearing in such an informal way were far more interested than through the traditional formal recitation and showed an increased interest in the proper care of these sense organs. Many questions were asked regarding food requirements and requests were made for balanced diets. The foreign posters resulted in comparing our health conditions with those in other countries. Several class discussions resulted from the questions asked and

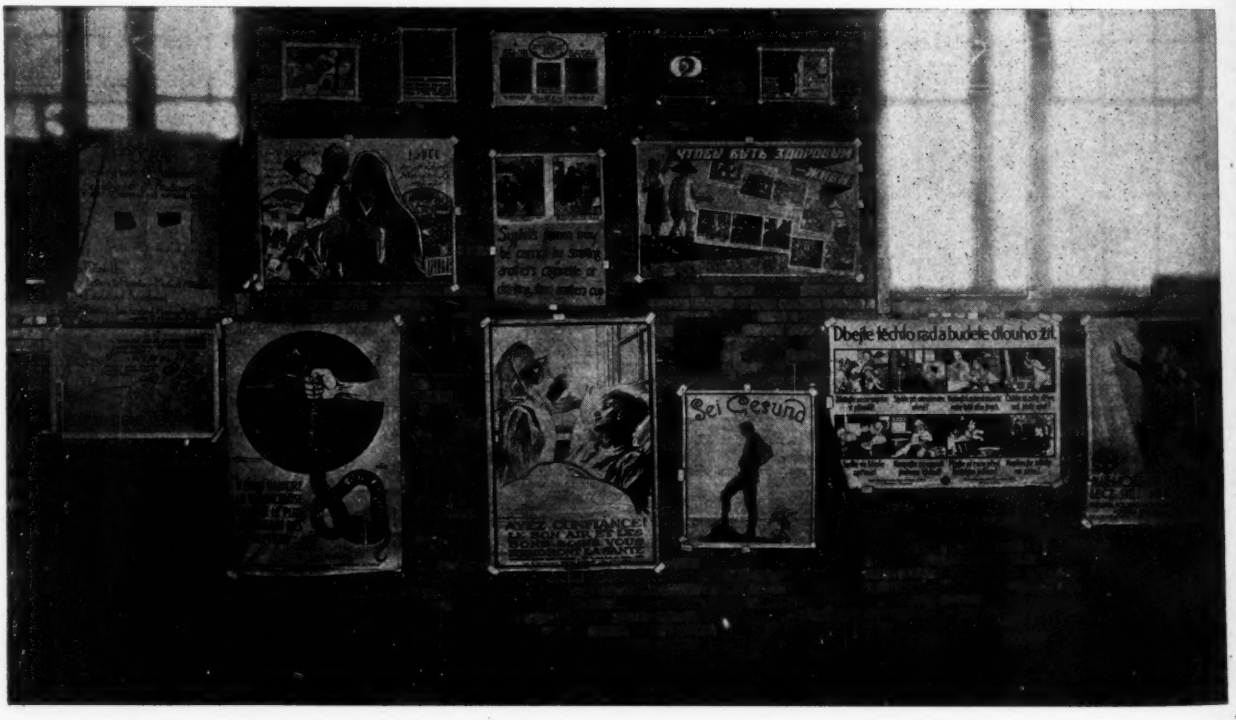
Display of Fresh Foods Furnished by School Lunchroom—Under Supervision of Nutritionist

the interest shown in the posters, charts, and books concerning the use of alcohol.

For real success of the health program the coöperation of the parent is most essential. Acting on the saying that "seeing is believing" we sent invitations through the Parent-Teacher Association for a "Parents' Evening." Their attention centered about the exhibits showing the coöperation between the school and the outside agencies concerned with the correction and preservation of health. Judging from their enthusiastic comments, these parents will be strong supporters of the aims of our program.

In our opinion the exhibit provided student activity; stimulated thinking; reënforced the instruction in the hygiene classes; and created an interest which we trust will strengthen the formation of health habits.

Foreign Posters Dealing With Health Subjects



Tests and Measurements

for the Administrative Program of Physical Education: A Statement of Present Status

By

C. H. McCLOY, Ph.D.

State University of Iowa

A RECENTLY compiled bibliography on tests and measurements in physical education now numbers more than four hundred titles; while this is not an indication of the amount of worthwhile research done in this field, it is at least an indication of the growing interest in the testing movement. It is significant that recent textbooks have avoided discussing at least four-fifths of the tests that have been devised.

In spite of the amount of work already done there is still need for the development of new tests, and much work is needed to refine and make more valid and reliable the batteries of tests we now have.

In the administration of a program of physical education, the place of tests and measurements is apparently not clear to all. Some teachers administer tests but make no constructive use of the results. Others take the attitude of "what's the use of testing anyway?" Is testing, in physical education, really worthwhile?

A test or measurement is worthwhile *only if it helps the administrator or the teacher of physical education to serve the pupil better than would otherwise be possible.* Teachers have always passed judgments on the abilities of their pupils. These judgments are not always accurate. It is found, for example, that the teachers' estimates of pupil intelligence and the results of a battery of intelligence tests usually correlate about .45. That this low correlation is not altogether due to the shortcomings of the intelligence test is shown by the fact that teacher estimates also fail to correlate highly with each other. Teacher estimates of pupil physical abilities are more accurate. In one of our studies we found that teachers' estimates of general motor ability correlated .70 with a large battery of achievement tests. This is probably because of the greater objectivity of physical education activities. Accurate teacher estimates of pupil ability, however, are frequently not possible for a number of weeks, or in some cases months, after the beginning of a new school year. The use of valid and reliable tests should provide the teacher with reliable information very early in the term. In other words tests are useful, if for no other reason, because they give the teacher the desired information about the capacities and abilities of pupils when this information is needed. Such information will be important only to the teacher who is trying to promote a *purposeful* program.

One of the common errors in the utilization of test results, is to expect one test to test everything. One frequently hears a test criticized because it does not furnish information for which it was obviously not designed. Just as one would not expect a hand-writing scale to be a valid test of mathematical aptitude, so one should not expect a test of strength to be a valid measure of skill in baseball. Most good tests are useful primarily because they measure accurately *one limited type of ability.* The users of tests should first ascertain the purpose for which the tests in question were designed.

The purpose of this paper is not primarily to discuss the needs in testing—though a few such will be pointed out—but to present briefly a few of the best tests and measurements at present available and to indicate the use or uses of each. In such a limited space, this subject cannot be treated comprehensively. The tests discussed below will be grouped into what may be called "functional groupings."

Tests of General Motor Capacity

General motor capacity as used in this connection denotes *original* motor abilities of the non-specific type. By this is meant the *general* abilities which underlie almost all specific motor abilities. In this group of tests there are none which seek to test the specific skills of such activities as basketball, hockey, or swimming.

In a battery, we shall have to include several tests which measure relatively unrelated abilities, all of which enter into general motor capacity. A recent study in this field[1]* has determined that three (for girls and women) and four (for boys and men) different tests or measurements, when properly combined, measure general motor capacity to such a degree of accuracy as to give correlations of .93 with a large battery of achievement tests. This battery is made up of tests already known, each of which will now be described and commented on below.

1. *The Sargent Jump.*[2,3,4]

This test measures the extent to which one can project his body upward with a jump. In order that this test may be effective, three conditions must be observed:

(a) Instruction in the best form must be given. This form is as follows: Swing the arms downward and backward, bending the knees to about ninety degrees, and bend the body slightly forward. In other words assume the position taken at the beginning of a standing high jump. Pause in this position (this prevents double-jumping and near-double-jumping), then jump upward as high as possible, swinging the arms violently

* Numbers refer to references at end of article.

upward to the vertical, with the body straight from head to feet. Just before reaching the highest point of the jump swing the arms forward and downward to the side. This movement should be timed so that this downward position is reached just at the top of the jump.

(b) Practice must be given in this jump until the form is mastered. The arm swing alone will add from two to four inches to the highest possible jump.

(c) For most accurate results, more than one test needs to be given. That is, the individual should be tested on more than one day. The height of the jump may vary from two to three inches from day to day. Since what is desired is the pupil's *best possible* jump, it is desirable to test the individual several times on different days. Methods of scoring the jump are given in the references cited.[3,4]

The Sargent jump is a test of the explosive contraction ability of the muscle. That is, it is a test of relative potential *horse power,* which is one important element in general motor ability. When the test is properly given, it correlates about .80 to .85 with a battery of achievement tests, particularly those of the track and field type.

2. *The Brace Test*[5]

The test is primarily a measure of *motor educability.* It is, unfortunately, made up of stunts, many of which are used in the activities programs of many school systems. In such schools, after the pupils have entered upon the stunt program, this test will be of little value. The Brace test has recently been improved (unpublished study). The original test items which correlated below .30 with motor ability were eliminated. To twelve of Brace's original battery other tests have been added. All of the items adopted have a correlation with motor ability of from .40 to .87, the average being around .65. These tests must be given without previous practice. Even one practice experience impairs their usefulness.

3. *The Burpee Test*[6]

This test, which is relatively unknown, is given as follows: Upon the word of command, the pupil bends forward, bending his knees as far as desired, and places his hands on the floor. He then thrusts his legs backward to the front leaning rest position. He then returns to the first position and rises to the position of attention. He does this movement as many times as possible in ten seconds. The results are counted in full movements and quarters of a movement. Thus if the stopping signal is given with the pupil in the front leaning rest position this counts as adding two-quarters of a movement to the number already completed. This test is primarily one of agility and of big muscle coördination. It should first be practiced several days until the pupil understands the form of the test.

4. *The Classification Index*[7]

In the test for boys, what we have elsewhere called the Classification Index is added to the battery. This is an index number obtained from the following formula:

20 (age in years) + 6 (height in inches) + weight in pounds.

Age is not counted past seventeen. That is, all ages of eighteen or over are counted as seventeen years. As is readily seen, this is a measure of size and maturity. In girls and women of high school age and up, the Classification Index is valueless. There is some evidence that a similar formula is useful for girls in the elementary school and junior high school;[8] but as yet the best formulae have not been determined.

For the purpose of computing the General Motor Capacity Index the following formulae are used:**

BOYS

.82 (Sargent Jump, in centimeters) + .53 (Brace test) + 2.26 (Burpee test) + .19 (Classification Index) — 182.

GIRLS

2.03 (Sargent Jump, in centimeters) + 3.30 (Brace test) + 17.64 (Burpee test) + 45.

Tests of General Motor Ability

Again the word "general" restricts the scope of this group of tests and excludes measurements of specific abilities; such specific abilities, however, frequently highly correlate with both general capacity and general ability.

After trying a large variety of tests it was found that the two following groups test almost everything in this area that is tested by more comprehensive batteries.

1. *Tests of Strength*

Recent studies seem to indicate that the Rogers' Strength Test,[9] at least as it is given to men and boys, can be markedly improved. In a group of carefully chosen male high school students—chosen because they were well trained in athletics—the Rogers' Test gave a correlation of .64 with athletic ability as determined by a battery of four track and field events. The following battery of strength tests gave a correlation of .77 with the same battery of track and field events:

(chinning strength) + .5 (dipping strength) — (weight)

Chinning and dipping strength are computed by our formulae[10] and are expressed in pounds. The weight of the body is then subtracted. Dipping is done on the parallel bars.

The companion study for girls has not yet been completed. If chinning is done according to Rogers' method,[11] chinning strength can be computed by the following formula:

.67 (weight) + 1.2 (number of chins) + 52.

The strength-equivalent of Rogers' dip for girls can be computed by this formula:

.78 (weight) + 1.1 (dip) + 74.[12]

The effect of subtraction of weight in strength tests for girls has not yet been studied, but it is perhaps significant that we have found that the *number* of chins (girls) is of more value than *computed chinning strength.* This finding needs further verification.

2. *Track and Field Events*

Track and field athletics with a diversified battery of events comprises one of the best tests of general motor ability that we have. There are two types of such tests

**For general information the following statement is offered for what it is worth. The intelligence quotient, as computed from the usual abstract intelligence tests, is almost entirely worthless as far as its relationship to physical abilities or capacities is concerned. There is a real need for an intelligence test that will measure what we may term "athletic intelligence." Such a test has not yet appeared in the literature.

which have been well validated. In neither case has there been any research published on this type of test for girls. The first of these published tests is that by Cozens.[13] In this test the events are scored on the "T"-Score, and are adapted only to men of upper high school and college ages. The second of these tests is that by the author[7] in which the scoring tables are computed according to the horsepower developed. This test is applicable over any normal athletic age range.

In computing general motor ability, formulae have been devised where chinning alone is substituted for the whole strength test. These formulae are as follows:[1]

BOYS
.20 (chinning strength) + .05 (track and field points) — 41
GIRLS
9.6 (*number* of chins) + .42 (track and field points) — 20.

In these formulae track and field points were recorded from the author's scoring tables;[7] four events were used for boys and three for girls. The chinning for boys was from the high horizontal bar and that for girls from a bar four feet from the floor with the girl in the back leaning hang position. (See Rogers' directions.[11])

The test scores of general motor capacity and of general motor ability are mathematically related, and general motor ability *relative to capacity* is readily computed. All of the above computations are easily done by the use of tables.

In classifying students for physical education activity programs, the test of general motor capacity plus the strength test will give the best basis for division. A satisfactory formula for this classification is now available.

May we emphasize again the fact that these two batteries of tests tell first, the innate general motor *capacity* of the individual and second, his general motor *ability* at the time tested. This combination presents possibilities of determining not only the absolute ability of the individual but his relative ability in terms of how good he *can* be. This is suggestive for grading as well as for classification.

Prediction Tests

To mention prediction tests is to bewail the lack of excellent ones. The Sargent Jump, when properly computed with age, height, and weight, is a splendid prediction test for track and field ability. Few other prediction tests have been adequately validated. Edgren[14] has recently developed a prediction test for basketball, but this is only of value for pupils who have been at least partially trained in basketball techniques. Edgren has, however, experimented with certain other fundamental tests which give considerable promise of being good general tests of potential basketball skill. These need further study. The author is not aware of any other tests which may be used as *prediction* tests for potential sports' skills. Certain studies[15] have shown, however, that track and field abilities of skilled performers correlate about .80 with skill and playing ability in basketball and soccer football. Wells[27] has shown correlations of about .60 between track and field and football, and has secured a multiple correlation of .70 between football and a battery of motor ability tests. One would expect, therefore, that the test of general motor capacity and that of general motor ability might show similar relationships. A study of this problem is under way.

Achievement Tests

Good achievement tests are much more commonly available. Norms for such tests are available in track and field athletics for boys and men in Cozens[13] test and in those of McCloy.[7]

Edgren's basketball test[14] and the baseball and indoor baseball tests of Brace[13] and of Rodgers and Heath[16] are promising beginnings in these fields. The author cannot recall any other batteries of achievement tests that have been adequately validated. There are many excellent and well developed tests, however, which have been published in current books of tests and measurements.[17,18] Space does not permit of a detailed discussion of these here. There is a real need for standardized tests for many indoor program activities such as gymnastics, stunts, tumbling, rhythms, and dances. The last two activities present difficult problems. The first three could be readily standardized and graded by an appropriate modification of the "T"-Score[19] technique.†

Behavior Frequency Rating Scales

The educational phase of physical education as it is related to the development of transferable traits is one of the important fields for measurement. The author has composed three scales for recording the observed frequency of significant behavior of the pupil. Only one of these—the behavior frequency rating scale for rating the behavior of the pupil in physical education activities—has been tested for validity and reliability.[20] This has been reduced to a rating scale of twenty items. The other two are rating scales for use in rating classroom behavior (for its relationship to physical education activity behavior) and for the rating of the pupil's home behavior by his parents. These two have been prepared, and studies involving their validation are under way. This is a field in which much more study is needed and is one around which much significant research should be centered within the next five years.

Health Knowledge Tests

At least two significant batteries of health knowledge tests have been published. One is the Gates-Strang Health Knowledge Test[21] and the other is the battery devised by the American Child Health Association.[22] A number of other such tests have been devised and validated but have not been published. This field has been reasonably well explored and a beginning has been made in the development of health ratings for health habits.[18]

(Continued on page 57)

†Tables V and VI in *Statistical Methods Applied to Education* by H. O. Rugg (Houghton-Mifflin) are probably much better adapted to use for this purpose than is McCall's T-score. These tables give a much larger range of scores than does the T-score, and are correspondingly more satisfactory to the pupil.

Sandwich Island Olympics

By
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BEING on the receiving end of a couple of forward passes made with a stone football weighing about twenty-five pounds might cause even a Notre Dame half-back to fumble. The Sandwich Islanders of a couple of centuries ago left no rule books, so the referee's decision in case of an incomplete pass is a matter of conjecture. As for punting, one can safely guess there was very little of that done. Yet, the modern Hawaiian plays an excellent version of the famous collegiate sport without the impediment of equipment which has made the game dear to the hearts and purses of our college alumni. The Hawaiian of today, from grade school age on, plays much of his football barefoot. In cases where the teams are equipped, the player is obviously uncomfortable, and ten to one he discards shoes, helmet, and shirt before the whistle sounds for the half. Needless to say, the players are not bothered much with fallen arches.

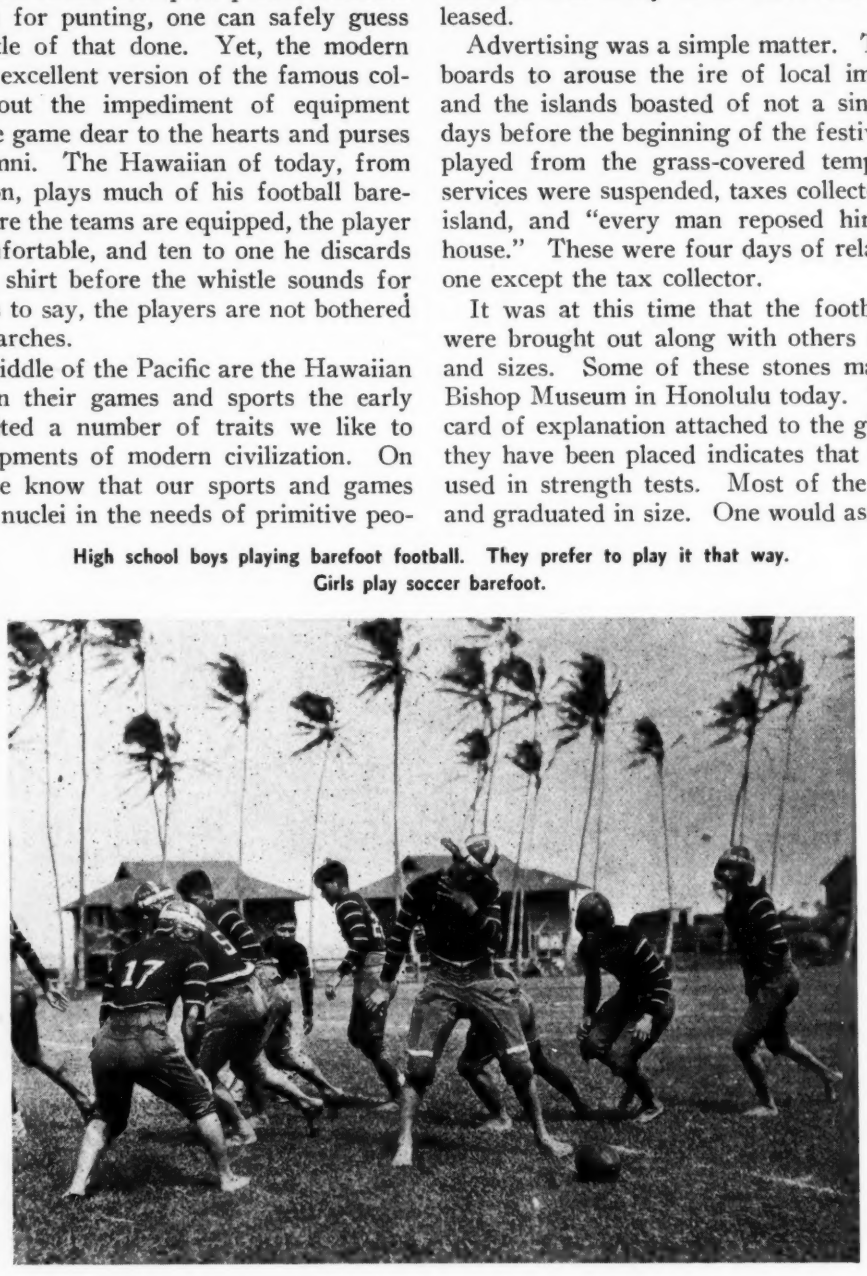
Isolated in the middle of the Pacific are the Hawaiian Islands, and yet in their games and sports the early Polynesians exhibited a number of traits we like to think of as developments of modern civilization. On the other hand, we know that our sports and games of today had their nuclei in the needs of primitive peoples. It is interesting to note again that despite the color of our exterior covering — red, black, white, or brown—we are, like Rosie O'Grady and the Colonel's lady, pretty much the same "under the skin."

Annually, in the time of year corresponding to our October, the ancient Hawaiians declared a four month vacation in honor of the god Lono. To be especially observed during this period was the Makahiki, a festival of games. Work was taboo and should anyone be caught in the disgraceful act of plowing his fields he was punished. Depending on the whim of the king, the punishment might be death, exile, or if the royal larder was low the offender was likely to be fined one live pig and released.

Advertising was a simple matter. There were no bill boards to arouse the ire of local improvement clubs, and the islands boasted of not a single editor. Four days before the beginning of the festival flags were displayed from the grass-covered temples, all religious services were suspended, taxes collected throughout the island, and "every man reposed himself at his own house." These were four days of relaxation for everyone except the tax collector.

It was at this time that the football shaped stones were brought out along with others of various shapes and sizes. Some of these stones may be seen in the Bishop Museum in Honolulu today. The small printed card of explanation attached to the glass case in which they have been placed indicates that these stones were used in strength tests. Most of the stones are round and graduated in size. One would assume that the athlete started with a stone the size of an ordinary eight pound shot, and progressed to the one which is as large as a cage ball. From the size of the larger stones one would judge that men were men in old Hawaii. Even today they qualify as traffic officers or beach boys.

High school boys playing barefoot football. They prefer to play it that way. Girls play soccer barefoot.



One of the smaller - than - average beach boys watched the product of a mainland college

Outrigger canoes being launched preparatory to catching the wave and racing back to shore. It is assumed that the first immigrants came to Hawaii in these canoes.

stadium exercise on the beach one day with a patent "chest-developer." The athlete had two of them, one of which was quite new and in which the spring was so strong that a great deal of effort was required to stretch it a mere six inches. The beach boy drew closer in friendly curiosity as the other strained at the contraption. He noticed the swelling biceps, and the prominence of the veins in the neck. He picked up the unused one lying on the beach and the athlete, who was exhausted and securing some much needed rest, handed him the newer one. The boy took them both.

"How you make? Like dees?" he asked, pulling both springs to full distance several times, almost as easily as a child stretches an elastic band. The astonished athlete sank in the sand. And now the beach boy wonders why the *haole* tourist no longer does any "chest-developing" on the beach.

Foot racing was a popular sport during Makahiki. The *kukini,* or runners, were obliged to go through a rigorous training period before the races. The runner was first exercised by walking on his toes without touching the heel of the foot to the ground. The walk was then increased to a jog for a moderate distance before the contestant was trained to run longer

A co-operative fishing party. Pulling in the hukilau, a fish net several hundred yards long. Ti leaves fastened to the rope frighten the fish into the net. Note—Those are islands, not icebergs, in the distance.

and longer distances for the final races.

Of the runners it was said that the speedier ones could take a fish from a pool on one side of the island and carry it to a pool on the opposite side in time to fling it in the water alive and wriggling. The island of Oahu is mountainous and about thirty miles in diameter. Making due allowance for the natural exaggeration of primitive story tellers, and the lack of stop watches, the speed obtained by these savage runners must have been considerable.

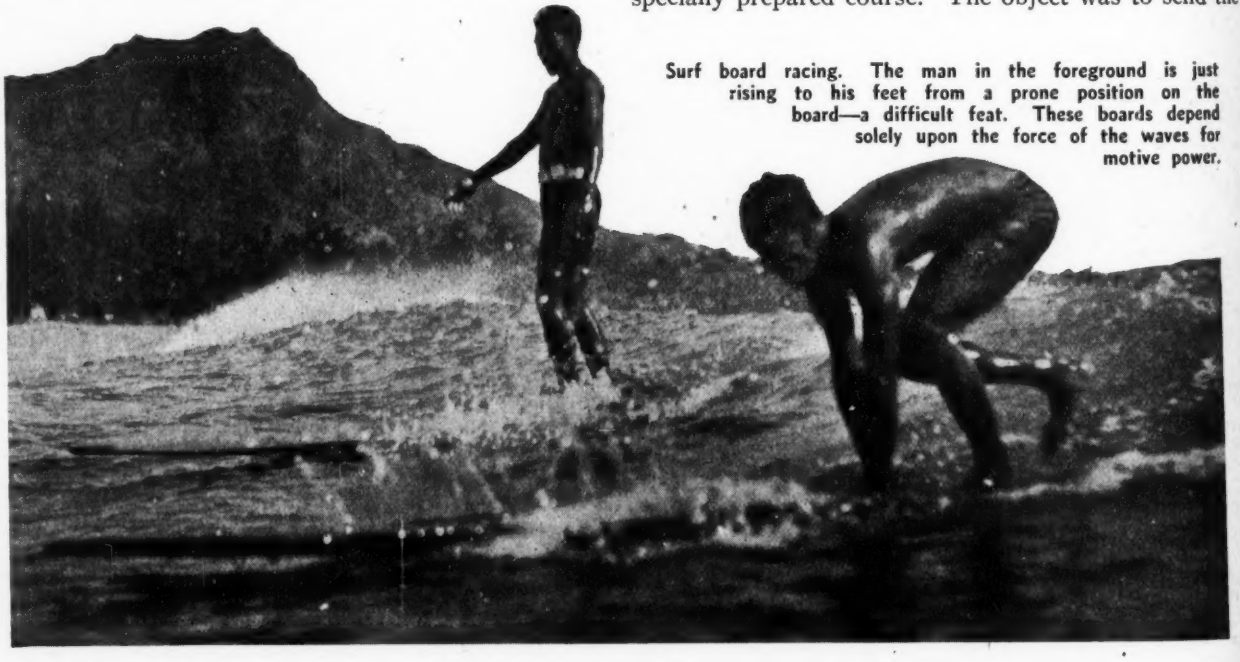
That these primitive people had some knowledge of the principles of nutrition is evidenced in the fact that the runners and other contestants in the sports of the Makahiki were denied heavy starchy foods such as *poi* during the training period. They dieted on rare-done flesh of fowl and roasted vegetables such as taro, sweet-potato, and breadfruit, which were common to the islands. At the end of the training period, experts came to judge the physical condition of the contestants and make a public report so that the layman might place his bets more intelligently. The runners also bet on their own strength.

Hawaiian hula dancer in skirt made of shredded ti leaves. The hula was danced in ancient Polynesian religious rites.

Property included such chattels as wives and children. Feathers were the most valuable possession of the ancient Hawaiians. From the feathers were made the cloaks and capes worn by the nobility upon state occasions. The canoe was also highly prized by both the common people and the chiefs. Other properties which the Hawaiian considered valuable were the fishing nets and lines, stone axes, cordage and rope of all kinds, tapa cloth made from the bark of certain trees, and fish hooks made from tortoise shell or the bones of humans. Live pigs, dogs, and fowls were considered good security. Woven mats and dishes made from wood or gourds also had exchange value. Salt was a treasured possession. Any one or all of these things were offered as pledges when the professional athletes performed. The women bet as freely as the men. If the athlete had no property he could stake borrowed property on the outcome of the contest or pledge his own body in slavery. Once in a while a professional athlete stole a march on his civilized successors of the twentieth century and would sell out to his opponent, and have a third person place his bet—on the winner, of course.

Boxing was the most vicious sport of the festival, and a bout drew huge crowds. Often as many as ten thousand spectators gathered. There was no referee, and the boxers engaged in true primitive combat. Instead of warding off a blow from his opponent with his forearm, the Polynesian boxer met each blow fist with fist. When the opportunity to indulge offered, a little wrestling was not considered a foul. Unless he could break the other's bones or poke out an eye, the boxer was branded as having poor technique and hissed out of the arena. It was not uncommon for the dead body of the opponent to be left lying in the ring at the end of the bout as the winners collected their bets and jeered the losers.

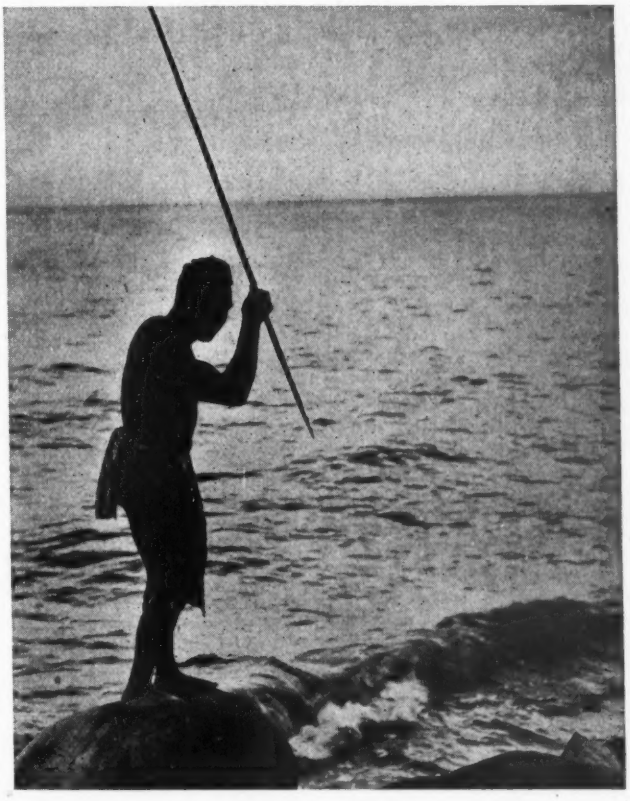
Bowling the *maika* stone was another professional sport popular at Mahakiki time. The maika was a disc shaped stone. These discs were bowled over a specially prepared course. The object was to send the



Surf board racing. The man in the foreground is just rising to his feet from a prone position on the board—a difficult feat. These boards depend solely upon the force of the waves for motive power.

maika stone through the aperture framed by two stakes set up at a distance. The best players could send the stones a hundred yards with accuracy, although thirty or forty yards was the usual distance. The maika stones were highly prized. Those fashioned from compact lava were capable of taking on considerable polish, and after using them the owners of the discs usually oiled them carefully and wrapped them in cloth.

Surf-riding and canoe racing had a prominent place among the festival events. Surf-riding is one of the typical Hawaiian sports. The board used to ride the waves looks like an enlarged edition of an ironing board. Lying on this ten-foot board the Hawaiian paddled with his arms until he reached the reef where the waves began to break as they rolled in to shore. Pointing the board toward the beach a quarter of a mile or more away, he caught the crest of the wave and rode in with exhilarating speed. After the board had gained momentum, the rider rose to his feet, and guided the board through the water by a slight adjustment of balance. The one who rode the farthest without spilling, or who crossed a designated line first, won the race.



Spearing fish in the old Hawaiian manner

Sport of both king and commoner was holua sledding. In the absence of snow in the sub-tropical climate, the Hawaiians utilized the steep grassy hillsides which became quite slippery when wet. In some instances sledding courses were laid out down a steep incline by first paving the path with flat rocks, then packing a layer of earth over them and covering this with grass.

The runners of the holua sled were about twelve feet long, set about three inches apart on the sliding base and six inches apart at the top where the rider rested. To keep one's balance going at breakneck speed down the hillside on this tipsy affair required a high degree of skill. Stories are told that some of the islanders were able to ride the holua sled standing upright, but that seems an impossible feat when one observes the precipitious inclines of Hawaii's hills.

Amateurs who did not have a holua sled made the ti plant, which grows wild in the mountains, serve the same purpose. The thick cluster of long, wide leaves at the end of the stalk makes an admirable seat, although it is of slight value as a shock absorber. Picnickers today often indulge in this sport of the old Hawaiians. Sliding is particularly good after a shower, which is to say it is excellent most of the time.

As in that famous recipe for Welsh rabbit which begins "First catch a hare," so in ti leaf sliding one must first find a slide. Ti leaves are plentiful. All else is a matter of luck, remembering always that there are two kinds of luck—good luck and bad luck. Choose a steep incline well covered with grass and free from rocks. Sit on the brink of the abyss, ti leaves between you and Mother Earth, the long stalk held well in hand. Those who have coasted down a snow-covered hill on a scoop-shovel find quite a few "carry-over" values to the new skill of ti leaf sliding. But here the great problem presented itself of what to do with one's feet? The scoop-shovel provides a convenient foot rest, but the only place to anchor one's feet while ti leaf sliding is behind one's ears. Legs and arms are useless appendages. He who lowers his heels during the breath taking descent stands a chance of being catapulted head first down the incline to the bottom without touching much of the intervening distance.

The sports and games at court during the festival season smacked of soldierly accomplishments. Spear throwing, rough and tumble wrestling, boxing and sham fights occupied a great deal of time among the residents of the king's court. In one of the popular combat games a long pole, much like a vaulting pole, was used by the player in assisting himself to jump over the ground in pursuit of his opponent, or to flee from an opponent. When cornered, he used the pole as a defensive weapon, and it was indeed a formidable one.

In none of these competitive sports, whether among royalty or plebiscite, is there any record of the winner having received a calabash bowl with his name and the event carved thereon. It is not likely that he received a medal, having but a loin cloth on which to pin it. There is no proof that he received any form of material reward. As a competitor not even his expenses were paid, and the question of whether he was an amateur or professional did not enter in. Some of the games were played without an audience. Viewed in the light of our superior civiliation and our criterion of the success of sporting events, the Mahahiki was one washout of a tournament!

An Interpretation of Rhythm

By

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CONSIDERING the goal of all education as the building for integrated personality through self-realization, and asked what is the significant contribution physical education has to make, I would mention the making of good motion habitual, helping students to gain mastery of their bodies so that all tasks would be undertaken and executed with an intelligent appreciation for an application of force and effort, and developing them as far as possible within their limits for efficient and enjoyable activity.*

The body should be considered as the outer aspect of personality. It is the medium through which we receive impression from the external world and by which we express our meanings. This means that the body should be given as careful study and as high a perfection of technique as the associated processes of thought and feeling. The most completely developed individual is the one who has trained all his powers with equal dignity and consideration that he may be physically, mentally, and emotionally integrated. No one of these three factors can be developed at the expense of the others. Our emotions and desires need intelligent selection and guidance and, to be carried to their fullest expression, they demand skillful execution. What will be the approach in striving for these objectives? An attempt is here made to show the important rôle rhythm may play in such a development.

Rhythm—what is it? What is its essential nature that we apply it alike to natural phenomena, organic processes, work and play activities, and finally to artistic endeavor? When asked to define rhythm, its meaning escapes us. And we become still more confused when turning to special fields for a meaning—such as music or poetry—for there we find special definitions and applications.

Rhythm is like electricity—difficult to define but recognizable in terms of what it does. The discussion that follows is presented not with the hope of completely defining rhythm but to aid in clarifying our concept when the word is used. Let us start building from something familiar—take any rhythmic experience, either the swing of a golf club, a tennis serve, a swimming stroke, or dancing. The experience, however, need not be confined to motor experience, for auditory, visual, and tactile stimuli may also give one rhythmical impressions. When asked to explain what we mean by saying the movement had rhythm, we might give such an answer as "It felt right" or "It satisfied" or "It had a swing." Examining this special experience further we might agree that it had something about it that caused the phases of the movement to seem organized. The movement was felt as a whole. It is this binding together of related parts into a whole that is the function of rhythm. And further, it is this feeling of the organization of parts into wholes that is the fundamental fact common to rhythm whether experienced in poetry, music, or bodily activity.

TO EXPLAIN the existence of rhythm and to understand it we must go to the laws of our own being and there discover that rhythmic experiencing is a capacity of the human organism. Rhythm is an attribute of man's nature. His physiological and psychological as well as his physical functioning obey the laws of rhythm and out of this involuntary obedience has come the highly conscious appreciation of form. But how? Through his senses man is subject to a constant stream of stimuli from the external world as well as from his own being. These experiences form the substance from which he builds his world with its meanings and significances. Life is a cycle of activity composed of receiving impressions and reacting to them. It is a constant release of energy, or as someone has more aptly said, "Life is a march of energy expended by all living beings in reacting to the forces of the universe that act as stimuli and make life possible."

Experimental psychology proves that it is a universal tendency of the mind to group any series of sensations even though the stimuli are not so grouped. This phenomenon has to do with the span of attention, but the ability to sense grouping varies in individuals. Therefore, rhythmic experience must be considered subjective and mental. To sense rhythm we must be conscious of it; and to be conscious of it, it must be an experience of the mind. In other words to be conscious of impressions means the mind is receiving stimuli through the senses. Just as we have special senses of sight and hearing that convey kinds of information to the brain, so do we have a special sense that informs the mind of our movements. This is the kinesthetic sense. Psychologists today quite generally agree as to the importance of kinesthetic sensations in the perception of rhythm. Meumann makes the statement that "the subjective holding together of impressions in a whole is inseparably bound up with the simplest cases of rhythmic perception, and this perception is due to kinesthetic sensations within the group that give us the uniting element for consciousness." Our rhythmic responses are based upon rhythmic experiences we gain from sensations of muscle tensions and activity within

*A paper given at the 1932 Middle West District Association Convention at Columbus, Ohio.

the body. Just as we discriminate sound meanings through the auditory sense in terms of their duration and intensity, so through the kinesthetic sense we may come to know movement in terms of duration and intensity. Kinesthetic sensations then are "those sensations from active movements of muscles and joints by which we judge the force and extent of movement." Through kinesthesia we learn to feel the body in action and in balance, and to adjust to information given by the muscular sensations. But to gain these perceptions there must be attention given to those sensations reported to the brain, and in turn this study must be strengthened by an understanding of the principles of motion. These two phases cannot be separated for one involves the other.

BEFORE we can progress with advantage it is well to stop here and consider what motion is. Everything that happens in this universe is due to the manifestation of force in some form. It may be that of heat, sound, motion, etc. Ella White Custer speaks of this all-pervading force as "belonging equally to the realm of physics, the intellect and the spiritual nature. It is the vital moving force pervading the universe, ever present, ever active, impersonal, basic, elemental, propelling and continuous." Things work then because energy of some kind is applied to them.

By nature we are given a body constructed and designed for certain kinds of locomotion and body activity. Our skeleton is but a system of levers which serve for the application of force latent in the muscles resulting in motion. When motion takes place it implies the idea of change of position, either of the body or of its parts. It also includes the idea of direction, distance, and duration. The study of motion includes all these factors and the relation they bear to one another. But in the perception of muscular sensations in movement the factors of main concern are time and stress. For no matter what distance is covered or what direction taken, time is consumed and effort is expended. Moreover, it is only when these two factors of time and flow of energy are properly related, or "timed" that efficient and satisfying movement results. Time and stress then are the distinguishing characteristics of muscular sensations by which we can know movement. We can now state what rhythm is.

RHYTHM is measured energy. It is action and rest—control and release. Therefore it is a constant law of all muscular movement. Motor rhythm is the form in which muscular experience occurs. It is force manifest in muscular movement. This is saying that any movement, no matter how poorly coördinated or executed, has rhythm, but a rhythm that is different from that of the well-coördinated performance. The difference between the awkward efforts of first attempts and the ease and efficiency of perfected movement is due to the change in the "timing" of the related time and stress values of the movement phases. In other words "the rhythm" changes.

Since rhythm is force manifest in muscular movement and is measured energy it follows that every activity has intrinsically a proper proportioning of its time and intensity phases according to the nature of the impulse and end to be accomplished. Although a movement or series of movements may consist of several phases varying in duration and intensity, the rhythmical structure can always be equalized into units. This mathematical existence is present and active whether we realize it or not.

Isaacs, on this point, says, "The origin of subjective grouping may be the breathing rate, or it may be the memory of our walking rate. It is only by such mental time beats or unitary pulses that we are able to make anything like accurate judgments of time." Because of this proportioning we are able to analyze rhythm and study it objectively—intellectualize it and come to use it as a stimulating and unifying force. Most everyone experiences rhythm in some degree, but because they do not understand its elements and laws, they are not able consciously to employ it. Although including mathematical proportions, rhythm includes far more. An analytical study of rhythm, which can only be mentioned here, gives us the knowledge necessary to bring about a simple way of finding order in what would otherwise seem chaos. Analysis, however, should serve only as a means of bringing about synthesis as a greater awareness of the reality of rhythm. All the possible rhythms of physical activity and art lie dormant in these two simple factors, time (duration), and intensity. This is because their possible proportionings are infinite. In all experience "rhythm sustains force and gives it orderly sequence." Rhythm thus considered is synonymous with form.

The terms "a rhythm" or the plural "rhythms" and "rhythmic pattern" must not be confused with rhythm. Rhythm is the all inclusive term meaning measured energy. It is the feature that all "rhythms" share, while the other terms refer to a particular grouping of time and stress into a definite pattern resulting in a particular form. They embody rhythm.

Although the possible varieties of rhythmic patterns are infinite, the number found in purposeful activity is relatively small. Because of this fact we find in rhythm the possibility of a transfer of learning. Meyer goes so far as to say that " 'Rhythms' once learned no matter of which number of strokes and by what muscles they have been learned can be transferred to any one or several muscles which may have been entirely inactive during and unconcerned with the acquisition of that rhythm." In Professor Hocking's phrasing, "rhythm is like beauty—it overflows all departments and makes the man one piece." But the mere fact that two activities may have the same rhythmic organization does not insure a carry-over—but does make it possible. For transfer of training to be insured there must be identical rhythmic elements present and a generalization made in the one activity that will apply to others.

(Continued on page 54)

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Every Teacher's Responsibility

THE coming year will demand many readjustments in all branches of education, and physical education will be no exception. Physical education teachers, therefore, must be alert to meet new situations as they may arise in their departments. Their first problem is the unavoidable one of readjusting their programs to a diminished budget. Their second, and still more important problem, is that of protecting their departments, in so far as is possible, from additional setbacks. Every physical educator should give careful thought to all ways in which he may strengthen the prestige of his department.

Naturally, physical education, as one of the newer subjects in the educational curriculum, is faced with many questions from the more conservative groups in the community. The attitude with which the physical education teacher should answer well-meaning and honest questions as to the purpose and accomplishments of his work is so well defined by the short editorial by Mr. Blanchard in this issue that no further delineation of it is necessary here.

In addition, however, to this willingness and ability to defend his profession, the teacher of physical education must present his best possible efforts in teaching. This self-evident statement is occasioned by the fact that conditions today call for more than ordinary teaching. They call for super teaching. Any smooth-running department is a welcome assistance to the school administrators who just now are being harassed by the unusual demands and exigencies of the occasion. For the same reason any deficiencies in teaching are not only adding to the superintendent's and principal's worries, but are exceedingly detrimental to the profession. Physical education should be so taught that it impresses its own value upon the public consciousness. With the many rich objectives, materials, and programs that health and physical education has to offer, it should be possible to secure outstanding results that attract the favorable interest of the children and of the parents as well. If physical education is taught in this manner, there will be many grateful superintendents, principals, and citizens to champion its cause in the case that it is threatened by extreme tax-cutting measures.

The work of the physical education teacher will be made still more effective if he will identify himself with the community. Today as never before each teacher must exert himself to further efforts to promote his profession with the public. He must become an integral and influential part of the community life. He must educate the community in the advantages of his work to the children and in addition he must go even further and take an active part in outside community activities such as scouting, playground projects, civic celebrations, etc. He must be interested in the parent-teacher groups and be willing to talk before civic clubs and similar organizations. Mr. J. E. Rogers of the National Physical Education Service says: "In a number of cases where supervisors of the so-called special subjects are being done away with, the Director of Physical Education is being maintained, owing to the fact that he has connected himself with many community activities."

One of the most important methods for educating the public to the values of physical education is through demonstrations of both indoor and outdoor activities and programs. Through well presented health exhibits, physical education demonstrations, and athletic games and contests, the actual worth of this broad program can be shown, and friends will be made for both the department and the school as a whole. Principals are appreciative when physical education teachers make the most of such opportunities to win public understanding and good will.

It seems almost unnecessary to say that teachers should ally themselves with the progressive elements of the community and should be interested in the selection of competent city and school board officials. Their support should go to those candidates who have the interests of the community and of its children at heart and who are actuated by the spirit of altruistic service.

In facing his work with these responsibilities in mind, a physical educator has some factors to encourage him in the outlook. In the first place, as the school year opens, there is a noticeable increase in the feeling of security and optimism in financial circles. This business improvement is bound to check much of the extreme economy measures which have been threatening not only the efficiency but also, in some cases, the very existence of the public schools. Each year, too, adds to the number of graduates who have enjoyed the benefits and privileges of modern physical education facilities and programs. This naturally means that the body of sympathetic interest in physical education is constantly growing in influence. If the children of today are really receiving and enjoying benefit from the programs you are offering them, they will be enthusiastic supporters of health and physical education for the school children of tomorrow. As teachers of this important subject, it is up to us to prove its merits.

A Complete Physical Education Bibliography

IN THE October issue of the *Research Quarterly* there is one feature that should be of interest to all JOURNAL readers. This is a complete bibliography of all books on health and physical education, a study that has been carried out by Dr. C. H. McCloy of the University of Iowa with the aid of his assistants. It represents the work of many months and brings to the profession of physical education for the first time an exhaustive reference list, one that is all-inclusive to the end of the year 1931, and one that comprises eighty pages of printed material. Because of the value of this particular issue to every physical educator's library, a large edition of the *Quarterly* has been printed and a special price is offered. The aid of all readers is requested in calling attention to possible omissions or errors in this comprehensive list of books. In this way the list will be as authentic as possible, and by supplementing it each year from Professor Affleck's annual bibliography, can be easily kept up-to-date.

Thoughtful Attitudes

IT IS incumbent upon each and every one of us in this period of uncertainty and readjustment to maintain a sane and balanced attitude toward our profession and its relationship to education in general. We should present a solid unified front, belief in our profession, and confidence that it can meet any challenge which may be launched. We should come through this period of readjustment and reorganization into a far stronger position than before. It sometimes takes just such shocks as we have been receiving to promote a clear analysis of our program, its strength and its weaknesses, its true values and its assumed values. A "why" to our profession should be welcomed open-mindedly and gratefully; and answered pleasantly, firmly, and confidently. Any attitude that smacks of panic or resentment as questions are raised can but incur doubt in the mind of the questioner, a doubt that may have serious and far-reachng results.—By *Vaughn S. Blanchard, Supervisor of Health Education, Detroit Public Schools.*

Frances Musselman

In Memoriam

FRANCES Musselman, pioneer in the profession of physical education and known throughout the country as a leader and teacher, died early in July in Chicago, the scene of more than two-thirds of her forty-five years of service in her chosen field.

Miss Musselman's reputation rests securely on the foundation of the lives and successful careers of more than a thousand teachers of physical education, who received their training and much of their inspiration under her during the last fifteen years, when she was director of the Chicago Normal School of Physical Education, now Kendall College of Physical Education. Although she had resigned from active service there, she retained the position as Director Emeritus until the time of her death. In addition, she is lovingly remembered by hundreds of former students at the Francis W. Parker School in Chicago, where for nearly two decades—from the founding of the school until 1917—she was a member of the faculty.

Miss Musselman began her career when physical education was still a new subject in the curricula of American schools, and her constant study and experimentation resulted in adding much to the knowledge and technique of the profession. Devoted to teaching, her life's ambition was realized during the years she was training others to become capable teachers themselves, and those whom she thus served as guide and counselor will be the first to testify to the thoroughness of her work and the inspiration of her leadership.

Born in Danville, Pennsylvania, sixty-four years ago, Miss Musselman was graduated with a B.E. degree from the Bloomsburg (Pennsylvania) State Normal School and taught for ten years in the rural and small town schools in that state, thus acquiring an unusually thorough foundation of practical experience in the problems of teaching children, which she was later able, in an unusual degree, to pass on to her students.

For a year after these experiences she attended the Boston Normal School of Gymnastics, followed by a summer at the Harvard Summer School. The next year she was graduated at the Sargent School of Physical Education. Her first year of teaching physical education was spent at Stevens Point State Normal in Wisconsin, from which position she was called to the Francis W. Parker School.

At the thirty-seventh annual convention of the American Physical Education Association the Honor Award for meritorious service to the physical education profession was given her *in absentia.*

In the hearts and minds of all her friends, in the work of those she trained, and in the profession to which she devoted her life, the memory of Frances Musselman will long endure.—By *Virginia H. Kendall.*

The Relationship of Physical Education and Personal Adjustment

By

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I FEEL greatly honored in having been invited to be present at this conference and I am delighted with the opportunity of taking part in your deliberations.* The psychiatrist is often accused of being so accustomed to thinking in terms of the psychogenic components of maladjustment as to occasion the suspicion that possibly he neglects the equally important physical causes of illness. We welcome the opportunity of vindication.

So intriguing was your invitation to discuss the common meeting ground of the work of the psychiatrist and physical educator that I neglected to consider how little I knew of the scientific technique of physical training. Therefore, it must be apparent that I speak to you, not as an authority, but as a fellow student, hoping that by pooling our experience we each may gain a broader knowledge of a subject which is of vital importance to us both.

There are others who are better fitted than I am to express the aims of physical training. However, it may be assumed that these purposes are directed toward building up a good physique in order that the individual may have a machine which is capable of efficiently meeting the physical demands of life, toward the prevention and correction of faulty posture and more serious deformities; and in general to inculcate in the student a desire for good health, as well as a sense of pride in the possession thereof.

Before proceeding with a discussion of the physical factors in maladjustment it might clarify the subject to outline the psychiatric conception of personality and to review what part the elements of personality play in the field of individual adaptation.

It is evident that a human being is a body-mind machine, the existence of each being largely dependent on the function of the other. The mind for all practical purposes may be considered as being produced by a part of the body, namely the nervous system. This system has for its function the integration and coördination of the various parts of the individual, as well as the adjusting of the individual to his or her environment. Thus we might speak of the nervous system as the physical basis of personality. It is unnecessary to review its anatomical parts but it is well to think of it in terms of the sensory, motor, and association nerve pathways, and the spinal column which acts as a conductor of these nerves to and from the brain. The brain in turn is the seat of consciousness—that reservoir in which all individual experience is stored, later to be used in determining or at least influencing the adjustment of the individual to new situations. A thorough understanding of the theory of consciousness is essential if we are to adequately comprehend human conduct. It should be considered as a reservoir or store house of the individual's experience and inherent emotional tendencies.

With this understanding of the function of the nervous system and the nature of consciousness it is obvious that the personality of a human being is the result of innate intelligence, together with the type of training that intelligence has received; of the basic instinctive make-up of the person, together with his conditioned emotional reactions as determined by the experiences through which he has passed; of inherent sensitiveness and the facility of using such sensitiveness objectively rather than subjectively; of the natural rate of energy expenditure and the training he has received for directing such energy along constructive lines. A consideration of personality cannot be complete without recognition of the fact that most human beings can either be classified as possessing a cyclothymic type of personality—that is, one given to alternating mood reactions—or as a schizoid type of personality with a tendency to introversion, seclusiveness and the avoidance of competition.

Such factors as these will naturally play a part in the adjustment of a human being to a given situation and must be considered in outlining any educational program. To accomplish this result, the teacher must try to estimate the quantity and quality of a pupil's intelligence. An effort must be made to determine the individual's preferred emotional reaction, to discover if such a person is handicapped by fear, driven by an unreasonable pugnacity, unduly filled with sex consciousness, or impelled by a desire for importance which is being expressed through inappropriate channels. With it all there must be a sympathetic comprehension of the student's sensitiveness, a recognition of the fact that the element of sensitiveness is both a valuable asset and dangerous risk to its possessor. Also that when this element is present to an exaggerated extent it is necessary that all instructions be carried out with a minimum of criticism, at least until the individual has learned to understand his own sensitiveness and

*Delivered before the conference of instructors interested in "corrective" physical education in women's colleges held at Vassar College, March 11, 1932.

to handle it satisfactorily in an objective manner.

Thus it would seem that physical education must always be an individual problem to be approached through an understanding of the personality of the student and that the prescription of activities must be suited to both the physical and psychic needs of the person with whom we are working.

The Physical Factors in Maladjustment

From the psychiatrist's point of view the physical factors underlying maladjustment may be classified as follows: personal appearance, weight, strength, glandular functions, and general physical fitness.

It is a great help to anyone to know that his personal appearance is pleasing, or at least is not distasteful to others. People who have physical handicaps often possess a sense of inferiority, which causes them either to withdraw from their associates in so far as they are able, or to over-compensate for their handicap. This latter trait often occurs to such an extent as to seriously interfere with their efficiency and comfort. Such people may present a minor deformity which may frequently be corrected by physical training, or, if correction is not entirely possible, they may build up a sense of physical fitness sufficient to enable them to accept their deformity as a matter of minor importance. Similarly postural training if successful contributes to a sense of physical well-being and gracefulness which materially improves poise and is conducive to a comfortable state of mind.

Many people, girls in particular, are ill at ease and psychically disturbed owing to an unattractive skin, bad color, or unwarranted vasomotor reactions, such as blushing and excessive perspiration. It is a well known fact that these difficulties can be largely corrected by exercise, massage, sunshine, and cold water—the latter being administered in the form of cold showers, cold plunges, swimming, and diving.

Underweight and overweight are likewise both factors in producing maladjustment by similarly causing a feeling of being at a disadvantage in appearance in so far as others are concerned. The former—underweight—we can rightly consider a cause of a more serious difficulty, namely mental depression, it being a well known fact that people who are considerably below par in weight are far more apt to have depressions than those who are not. Similarly, depressions frequently follow a period of dieting; and practically all depressed states are improved by causing the patient to gain in weight. A moderate amount of directed exercise is the best known tonic in helping a patient to this end, and it goes without saying that strenuous and persistent exercise is the best method of reducing overweight, as well as maintaining such a reduction when it has once been effected.

The strength of human beings depends both on muscular endowment and the development of the muscles which they possess. Individuals who are physically weak are necessarily handicapped and often those who are not conscious of such a handicap frequently fail because of trying to accomplish more than they are physically able to do. People who have insufficient strength often experience periods of weakness which are most discouraging and depressing. This subject of muscular development is probably of more importance now than ever before in the world's history since it is imperative that human beings possess a sufficiently good physique to enable them to take part in a competitive world in which activity of all kinds is a prerequisite of success.

There are many maladjusted people whose chief difficulty is that they have not the strength or the technique to use what strength they possess to keep up with the pace at which most of the world travels. Persons who are not physically strong today are without doubt not only physically handicapped, but, what is equally important, are psychically at a disadvantage, inasmuch as they cannot take part in a great many of the interests of their associates.

At the present time it must be admitted that very little is known concerning the glands of internal secretion and the part that they play in influencing personality. However, it would seem that some such factor is present as evidenced by the depressions and change of personality which occur in known types of glandular dyscrasias. Likewise, very little is known as to practical methods of influencing glandular functions. That little, however, would indicate that people who are physically fit experience less of this kind of difficulty than those who are not.

It is well known that physical disease is a frequent cause of maladjustment, owing to the fact that many illnesses lower a person's morale, produce depressions, and give rise to a sense of invalidism caused by the fixation of the individual's attention on his or her body. Physical fitness is the best prophylaxis against illness, and physical training not only builds up a good body but likewise creates a desire to maintain a good physique.

Physical fitness, which can be attained only through a reasonable amount of exercise and a rational manner of living, tends to improve morale, makes one more sure of himself, reduces emotional strain, is conducive to a happy nature, and in many other ways too numerous to mention gives rise to a sense of well-being.

How the Physical Educator Can Help the Psychiatrist

It is probable that many people are predisposed, because of inheritance and temperament, to nervous disorders. Some of these people escape such illnesses by virtue of being reared in and living their lives in a simple environment. Others are fortunate enough to receive physical and mental training which enables them to withstand successfully the vicissitudes of modern life.

Exercise is of definite value both in the prevention and in the cure of mental disorders, neuroses, and personality dyscrasias. Recognizing this fact the physician constantly employs such methods as his experience has shown to be useful. The prescription for such activ-

ities is, however, not always as skillful as it might be if the physician had the advantage of the physical educator's counsel. He frequently finds that he can persuade the patient to take exercise in the course of an illness to facilitate recovery, but once the patient is better, he loses all interest in exercise even though he has been told that physical fitness would be a large factor in preventing further illness.

It is our hope that you people in physical education may be able to make suggestions to us as to how we may more perfectly employ physical education as a part of a mental health program. The psychiatrist prescribes physical education not only for the purpose of improving the patient's general health but likewise because it deflects the patient's attention from himself. It is often a bridge which helps him cross over from his own subjective attitude to a more objective technique of living by supplying new interests and incentives. We find that walking, tennis, golf, swimming, rhythmic dancing, and gymnasium games, such as deck tennis, basketball, handball, and squash, are the type of activities which seems to help our patients most. Under ideal conditions we would like to send our patients to you so that you might re-educate them physically while we re-educate their emotions and train their intelligence to function.

It would seem that such a program might easily be carried out in a well organized college. This would mean that the psychiatrist and the physical educator would have to work in close harmony, and it would call for conferences between the two in regard to the needs of each individual patient. It would mean that the physical educator would have to assume some of the functions of a social worker, as many of our patients do not take easily to physical exercise. It would be the rôle of such a teacher to make friends with the patient, to discover what interests he may have along the lines of physical activity, and to use that interest as a stepping stone to further training. This must be accompanied by an understanding of the psychiatric needs of the patient in order that he may intelligently be helped to a level of success along physical lines which would in many cases be a definite contribution toward the recovery and maintenance of psychic equilibrium.

How the Psychiatrist Can Help the Physical Educator

Many of the people who particularly need physical education do not receive it, since they have often found a method of evading the necessity of accepting such training. Almost any girl or boy with sufficient education to get into college can find some physician who will write a letter saying that it is best for that person to abstain from violent physical exercise; or, if the student does not wish to go to that much trouble, he can usually make a gesture of doing such work without actually accomplishing much. In other words, as I see it, one of the problems we must face is how to treat the child who evades exercise. There are often psychological reasons which explain such actions and it might be useful to briefly consider the nature of these.

Some people are ashamed of their bodily appearance and they are afraid if they go to a gymnasium others will discover what they consider their abnormalities. It is definitely for this reason that some boys evade gymnasium work, and I suspect that it may be similarly true with girls. This situation can be met by giving the individuals a certain degree of privacy, and as they find that many of their associates have some peculiarity of physique which attracts little or no attention they will have less concern over their own organic inferiority.

Other students, because of insufficient exercise in the past, consider that they actually are not strong enough to do the work and they are also ashamed to have others know how weak they are. These people should be helped to understand that their handicaps can be remedied, that they will not be asked to work beyond their strength, and that the objective to be gained is so important that they must be willing for the time being to accept the criticism of their associates should such occur (which it probably will not).

Another frequent cause for the evasion of physical education is fear—fear of fatigue, fear of pain, and fear of injury. Many people have an abnormal fear of fatigue and as a result they are nearly always tired. These are the individuals whom we speak of as wearing themselves out resting. It should be pointed out to them that there are two kinds of fatigue—true fatigue and that sense of fatigue which we call fatigability. The former, true fatigue, is a normal healthy feeling. It is a rather pleasant sensation and comes as a result of physical effort. It must be distinguished from fatigability which is a sense of fatigue owing largely to not having enough exercise as well as to getting one's attention focused on one's self. The people who suffer from a fear of fatigue really experience very little true fatigue. Their discomfort is due practically entirely to fatigability and it can be pointed out to them that proper exercise is the one and only way of curing this tired feeling.

The fear of pain or injury is a more difficult situation to meet. This is where the psychiatrist and the physical educator must work together. The psychiatrist teaches the patient the nature of fear, explaining that fear in itself cannot injure anyone; that the fear of a thing is probably worse than the actuality and therefore the only practical way to handle it is to consider fear as a normal stimulus to courage rather than allow it to be a deterrent to action. Similarly the psychiatrist is able to point out that pain in itself is not such a dreadful thing, that the dread or fear of pain makes one suffer ten times more than actually experiencing physical discomfort. The instructor, understanding the existence and nature of the individual's fear, sees to it that the student does not suffer any physical discomfort. As a result of this combined effort the student gains confidence, finds the work more interesting, and gradually becomes more adventurous.

Physical education offers one of the very best opportunities for re-educating the markedly apprehensive individual. This can be done by inculcating in such peo-

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Companion Tumbling

By

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COMPANION tumbling involves the combined efforts of two or more persons. In this type of tumbling the element of team work is paramount inasmuch as each movement in an exercise requires perfectly coördinated timing on the part of each participant. In learning companion tumbling every attention should be devoted to the details of safety. Aside from the standpoint of physical injury, courage in acrobatics is very often shaken because of a bad fall. For this reason no difficult exercise should be attempted without first making certain that it will not result in a fall. Of course, it is too much to expect that any great degree of skill may be acquired in tumbling without the participants receiving numerous bumps. However, these bumps need not be of a serious nature if ordinary safety precautions are observed. The use of the safety belt or "hand lunger" is imperative in learning somersaults and the various "pitches" in "doubles." It is likewise necessary for each participant to learn how to assist his companions in acquiring new feats. In addition to the use of the safety belt, "spotting" or placing the hand under the hips of an individual while turning in the air is an effective means of assistance. In every case it is the duty of the "safety" to prevent serious falls.

Companion tumbling is best accomplished if the heavier and stronger participant takes the bottom or "under stander" position, while the lighter and more agile person assumes the top or "top mounter" rôle. The under stander does practically all of the "pitching" while the top mounter executes the turns. In performing any exercise each individual must remain alert to prevent a fall or the improper execution of the activity. It is a good idea to arrange a starting signal for the beginning of exercises, and to speak words of encouragement while performing them. In this manner confidence and team work are developed.

Forward Somersault.—From a distance of about twenty feet from the mat run rapidly forward. Without decreasing the speed, "take-off" from both feet and leap high and straight into the air. At the point of greatest height "duck" the head forward quickly, double up into a "ball," throw arms downward violently and grasp knees in a "tuck" (Figure 1). Hold this position until landing (Figure 2).

Practice for great height. The turn in air must be made rapidly. The distance from the "take-off" to the landing position should not exceed four feet. Do not "balk" after beginning the somersault. In the beginning it is well to turn over two rolled mats placed one on top of the other. In this manner jarring bumps are eliminated. As soon as the "spin" is mastered remove the rolled mats.

Forward Somersault with Leg Toss.—The under stander stands behind the top mounter and grasps one ankle with both hands as in the upper right illustration on this page. At a given signal the top mounter leaps straight into the air assisted by the under stander and turns a forward somersault as described above.

Backward Somersault.—From a standing position, feet about ten inches apart, leap high and straight into the air as in the lower left illustration on this page. At the point of greatest height throw the head backward vigorously, draw knees to the chest and grasp them in a "tuck." Hold this position until landing (Figure 3). As in the forward somersault great height is necessary for perfect execution.

Note.—In figure three there is not enough height and the performer has not "tucked." He has been assisted by "spotting," or placing the hand under his hips.

Figure 1

Backward Somersault with Leg Toss.—The under stander grasps one leg of the top mounter (Figure 4). At a given signal the top mounter kicks downward hard with his raised leg, leaps high into the air assisted by the under stander, and executes a backward somersault as described before.

Backward Flip-Flap (Handspring).—From a standing position with feet about ten inches apart, lean backward, keeping trunk erect (Figure 5). At the point of overbalancing backward, whip arms overhead, snap head backward, and jump with legs. Land on hands with arms extended (Figure 6). Whip legs overhead and snap down to a standing position.

In the flip-flap there should be no attempt to attain height. "Whip," and back arch are essentials.

The hands should strike the mat about three feet from the take-off, or at a point equidistant between the take-off and the landing position.

Note.—In figure six the performer has turned from right to left. There should be more back arch and no bending at the knees.

Figure 2

Snap Down and Flip-Flap.—From a momentary hand-stand, snap down. Without checking the momentum thus gained execute a backward flip-flap as described above. This exercise should be practiced with an assistant "spotting" the performer as he turns in the air.

Round Off.—Run forward using same method as in the execution of a forward handspring. Instead of placing hands on the mat opposite each other and in a line parallel to the end of the mat as in the handspring, place one hand on the mat about ten inches in advance of the other and parallel to the side of the mat. At the moment the feet are thrown over the head, execute a half turn with the body and snap the feet downward to the mat. In this position the performer will be facing in the opposite direction from which he started (Figure 7).

The round off should be executed smoothly and with snap as it is used to convert forward speed into backward momentum by reversing the position of the body while in the air without checking the speed.

In figure seven the performer turned from right to left. The picture was snapped a moment after he had reversed his position in the air. Note position of the hands.

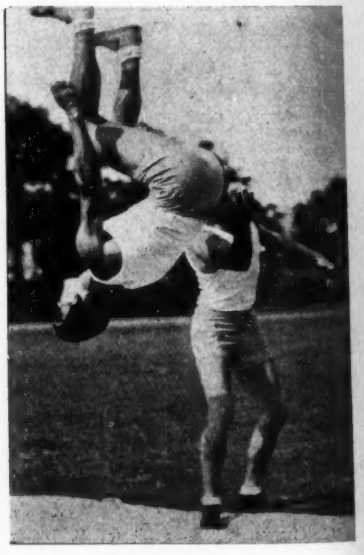
Round Off, Backward Flip-Flap, and Backward Somersault.—Execute a round off, go immediately into a backward flip-flap, and then into a backward somersault.

This combination requires speed and snap. It should be attempted first in the safety belt and later by "spotting" the performer until the various movements are mastered. Since the exercise is started from a forward run and the position of the body reversed by the round-off, the ropes on the safety belt must be crossed at the starting position—one in front and one behind the body. In this manner the ropes will be in the proper position for assistance after the round off is executed.

Back to Back and Pull Over.—The under stander and top mounter stand back to back and grasp hands over head (Figure 8). At a given signal the under stander pulls downward on the top mounter's arms and bends forward. The top mounter draws his knees to his chest and rolls over the back of the bottom man. Upon landing the performers retain their grasp, turn back to back, and again execute another pull over.

Ankle Toss.—The top mounter lies on his back with legs raised vertically. The under stander faces the backs of the top mounter's raised legs, grasps his ankles firmly, and assumes a comfortable position for lifting, almost straddling the body of the top mounter. At a given signal the under stander lifts upward on the legs of the top mounter. At this instant the top mounter executes a high back roll, pressing vigorously downward on the mat with his head, casting his chest forward and pushing hard on the mat with his arms, thus rising to a hand stand position. The coördinated efforts of the performers will cause the top mounter to be lifted high into the air. At the highest point in the air the under stander pushes the legs of the top mounter downward toward the mat, thus causing him to land in a standing position facing the under stander.

Hand to Shoulder Balance.—The under stander lies on his back on the mat with knees raised and arms extended upward (Figure 9). The top mounter places his hands on the under stander's knees and raises his legs over head to a balance. In figure nine, note the straight line formed by the body of the



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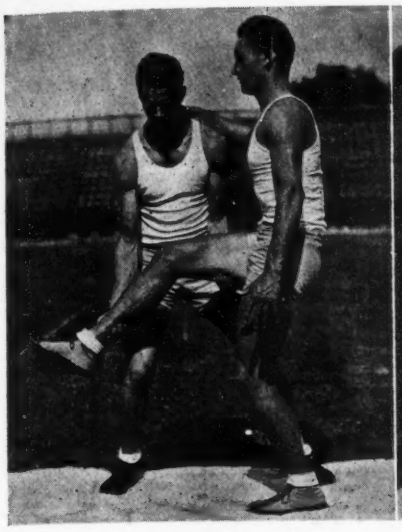

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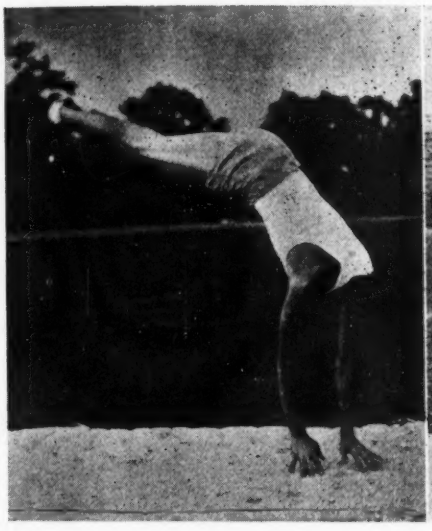
Figure 5

Figure 6



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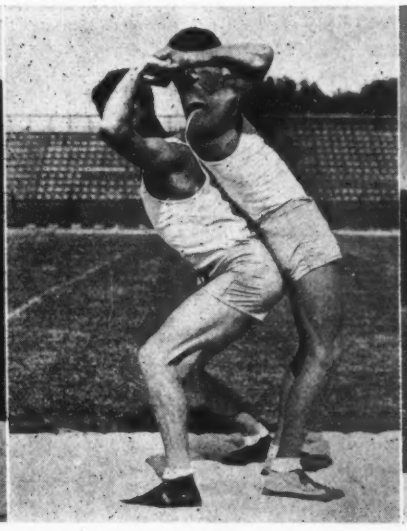


Figure 8

Figure 9

Figure 10

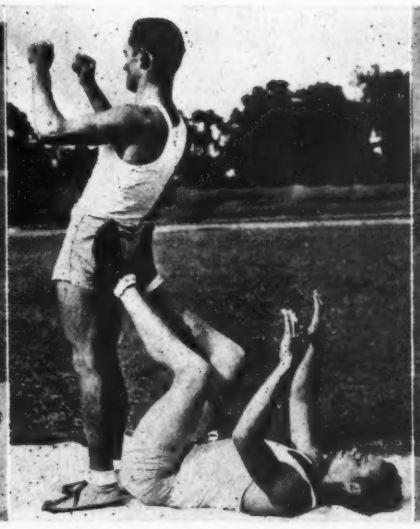


Figure 11

Figure 12

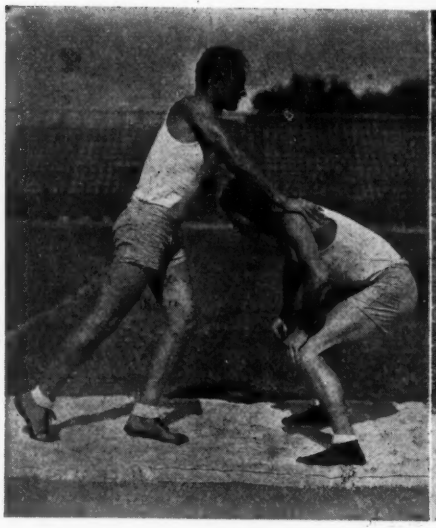


Figure 13

Figure 14

Figure 15

Figure 16

Figure 17

Figure 18

Figure 19

Figure 20

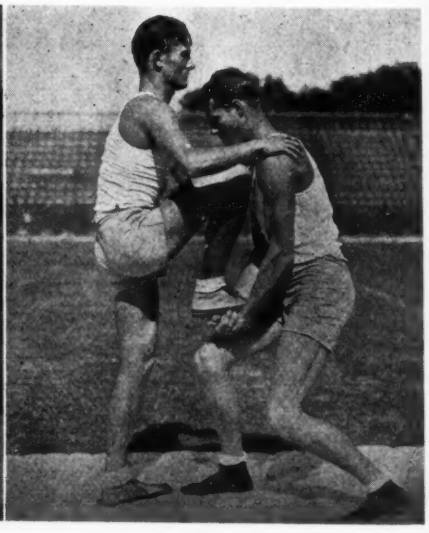


Figure 21

top mounter and the arms of the under stander. Practically no weight is borne on the arms of the top mounter.

Forward Hand Spring from Knees.—With the under stander lying on his back, as in figure nine, the top mounter runs forward, places his hands on the under stander's knees, and executes a handspring. The under stander pushes on the shoulders of the top mounter as he is turning.

Forward Handspring with Foot Toss.—With the under stander and top mounter in the positions indicated (Figure 10), the top mounter executes a handspring.

In this exercise the under stander pushes vigorously with his legs as the top mounter overbalances forward. At the same time the top mounter turns a forward handspring from the shoulders of the under stander.

A variation of this exercise is for the performers to grasp hands instead of placing hands to shoulders as in figure ten. The handspring is executed as above.

Backward Somersault with Foot Toss.—With the performers in positions indicated (Figure 11), the top mounter overbalances backward, pushes lightly with his legs, and draws his knees to his chest. At the same time the under stander pushes vigorously with his legs and extends his arms upward to grasp the shoulders of the top mounter as he rolls over. After this exercise is practiced for some time, the top mounter may be tossed high into the air. As soon as height is acquired the top mounter should learn to "lie out" while in the air; that is, to turn over with the back arched, legs together, knees straight, head up, and arms extended sideward.

A variation of the backward somersault with a foot toss is for the performers to assume the positions as indicated (Figure 12). This exercise is executed exactly as above, except that the under stander catches the body of the top mounter with his left foot (or right) as the top man is turning in the air. The upward push is given by the left (right) leg of the under stander.

Forward Handspring Over Back.—With the under stander in the position indicated (Figure 13), the top mounter runs forward, places his hands on the shoulders of the bottom man, and executes a handspring. At the instant of the spring by the top mounter, the under stander pushes upward with his shoulders, thus aiding in the handspring.

A sequence of the above exercise is for the top mounter gradually to eliminate the use of his hands on the back of the under stander and turn a forward somersault, landing with his shoulders on the upper back of the under stander. At this instant the under stander pushes upward, thus aiding in the somersault.

Arms Between Legs Pull Up to Stand.—With performers in the positions indicated (Figure 14), the under stander pulls upward vigorously on the arms of the top mounter which are held rigid, making certain to keep the top man's shoulders resting on his thighs. At the instant of the upward pull the top mounter springs with his legs, and as he is lifted upward "unrolls" to land in a standing position (Figure 15). Considerable height may be attained in this exercise if the upward pull and spring are properly coördinated.

Arms Between Legs and Forward Handspring.—With performers in the positions indicated (Figure 16), the under stander pulls upward vigorously on the arms of the top mounter which are held rigid. At the instant of the upward pull, the top mounter springs upward and turns forward as in a handspring, landing about five feet in front of the under stander. This exercise should be practiced for height and "lie out."

Forward Handspring Between Arms.—With performers in the positions indicated (Figure 17), the under stander pulls upward vigorously on the arms of the top mounter which are held rigid. At this instant, the top mounter executes a forward handspring between the arms of the under stander, landing about five feet in advance of the starting position.

Shoulder Mount and Stand.—The under stander assumes a wide stance with one foot slightly in advance of the other, knees bent, right arm extended upward and rigid, and left arm bent and rigid (Figure 18). The top mounter steps close to the side of the under stander and, keeping in close, grasps his hands and places his left foot upon his (the under stander's) upper thigh. With a light spring, the top mounter steps upward, places his right foot on the right shoulder of the under stander, and gradually raises his left leg to the left shoulder. The under stander assists the top mounter by holding his right arm rigid and by pushing upward with his left. Once the top mounter has placed both feet on the shoulders of the under stander, he presses his heels together and leans forward against the head of the bottom man who holds his neck rigid. At the same time he presses his toes downward against the upper chest of the under stander. In order to assist in the balancing, the bottom man grasps the legs of the top mounter and pulls them against his head as shown in the illustration on this page. To dismount, the top mounter grasps the hands of the under stander and jumps forward to the mat.

A variation of the dismount from the shoulder stand is accomplished by both performers holding themselves rigid and overbalancing forward. After having fallen forward about one half the distance to the mat, the

(Continued on page 56)

The Values of Horseback Riding

By

JANICE KENT

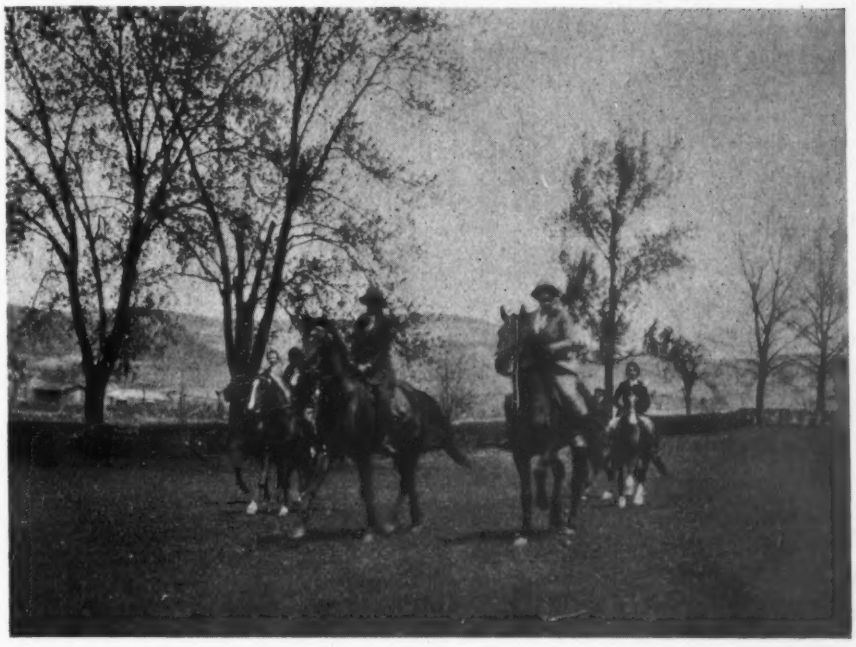
Director of Physical Education, Southern Seminary, Buena Vista, Virginia
Director Horseback Riding, Camp Kiva, Medina Lake, Texas

HORSEBACK riding is an important athletic activity that is being neglected by many Directors of Physical Education. Riding is offered as a part of the regular physical education program in comparatively few schools, except possibly in small boarding and finishing schools. It is being overlooked almost entirely by many of the universities and women's colleges. Yet here is a sport which produces valuable exercise and mental exhilaration, affords congenial companionship, and also provides a closer contact with nature than is afforded by most other sports. Let anyone who rides or who has ever ridden recall trips and immediately his memory will be filled with beautiful views, the spell of the woods, the sight of small woodland animals scurrying from his path, and many other equally fascinating things. Then, too, the great aim in physical education in colleges is to provide recreation which will have carry-over effects into life outside the school and thereby help the student to make the proper use of leisure time. No other sport I know of has more potentialities in this respect than that of horseback riding.

Because of the wholesomeness of the physical contacts of the sport of horseback riding and the necessity of considering another living creature, it makes for gentleness as well as firmness of character. It also develops a daring spirit, for when one has learned to ride, the pleasure is so great that he is willing to dare much to enjoy the sport. Along with daring comes courage.

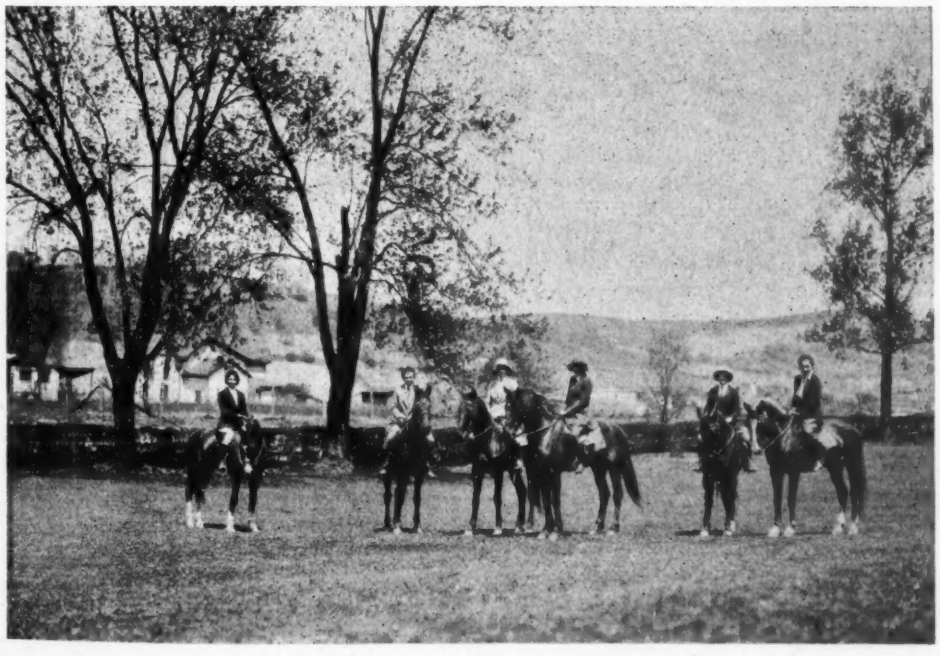
The physical benefits are obvious. To sit a horse well, one must develop grace and poise, and the exercise also tends to develop muscles which aid in the maintenance of good posture. It makes for nervous stability and the exercise and fresh air produce a healthy appetite. Another advantage in stimulating interest in riding is that it is a sport which can be enjoyed by people of all ages, and, in addition it is just as much fun to ride alone as it is with companions. Because of these many reasons, the opportunity to enjoy this pastime should be afforded students whenever it is possible to do so. It will be found that many are already interested because of their experiences with riding at summer camps.

Riding is apt to be neglected because it is generally believed to be an expensive sport and to take too long a time to learn. Neither of these objections is insurmountable nor is the sport as dangerous as commonly thought. The method I use to teach riding has taught several hundred students successfully, and there have never been any accidents aside from spills on the turf and these have never amounted to much. Always the girls have been persuaded to remount and ride at once.



AT Southern Seminary we have an average yearly enrollment of a hundred girls and out of this number about seventy enjoy the privileges of riding. The fee for riding is small and no extra charge is made for lessons. The only differentiation between riders is that the girls who know how to ride are allowed to ride on the road while the beginners must ride on the campus until they develop enough ability and confidence to manage a horse under more difficult conditions. We have developed some excellent riders by using a simple method. We do not have a riding ring but we do have a long strip of turf at the foot of a hill on our campus. This area is enclosed with a hedge which makes an excellent paddock. At the beginning of school the candidates who have ridden before ride up and down in review and are classified according to their ability. I never show by my attitude or indicate in any way to beginners that riding is difficult. I also maintain this attitude with advanced riders. This helps to give a sense of confidence to beginners. The day on which beginners report, plans are made to have advanced riders present, and to have them ride before the novices in order that I, as instructor, may direct attention to positions, the proper method of holding reins, and other points in management. After this, each advanced rider takes a new girl and introduces her to a chosen horse, telling the novice about the particular traits of the horse that have been learned from experience. The student instructors help the girls to mount, after which I show each girl how to hold the reins and the method of guiding the horse. We always keep the riders in sight and call out directions as they seem to need them.

It is my policy not to have a girl post the first time she gets on a trotter, for a great deal of the success of riding comes from having splendid balance. After the students have learned to balance well, posting is carefully explained and they are asked to try it. Sometimes I ride beside them, putting my hand under their elbow to aid in getting the rhythm. Using this method sometimes as many as twenty girls have been trained during a period of several hours. Because it is valuable training to have the girls get used to various horses, we have them change mounts often. It is rare for a girl to have to ride in the paddock more than three times before being able to take her first ride on the road. The first venture, however, is always taken on a safe horse kept especially for beginners. From the first ride on the road to the point where the girl can ride well is short work. This method makes it comparatively easy for one person to manage large groups and gives the pupils practice and experience in developing good horsemanship.



There is no reason why riding cannot again be-

(Continued on page 56)

The Teacher's Part in

Cornering Contagion

By

W. W. BAUER, M.D.

Director, Bureau of Health and Public Instruction,
American Medical Association

THE old-fashioned way of avoiding epidemics was to run away from them. Ignorance of the nature of contagious diseases left no other choice; the reaction of running away was simply a manifestation of primitive fear. We still lack a good deal of complete knowledge about the contagious diseases, but the advance of bacteriology in the last sixty years has given us much information which our predecessors did not have. Correct use of this information enables us to proceed more intelligently against the communicable diseases. The school teacher, particularly, will find much value in a grasp of the underlying principles on which contagious disease control is based.

To begin with, it is not expected, nor is it desirable, that a teacher should be able to recognize or even to enumerate the symptoms of the individual communicable diseases. Diagnosis is the job of the doctor and, indeed, sometimes it is not the easiest matter even for a skilled and experienced physician to distinguish between the various acute communicable diseases of childhood. The basic facts which the teacher should know are very simple. There are only two of them. The first is that *communicable disease is most likely to be spread in the very earliest beginnings of the illness.* That this is contrary to popular belief merely adds to the importance of having it firmly fixed in the mind of every teacher. The second principle is that *communicable diseases in their earliest most contagious stage are likely to be obscure and difficult of recognition.*

Out of these basic facts grows the first rule of procedure which, likewise, is brief as well as simple and sensible. Here it is: *Isolate first and investigate afterward.* Translated into action this rule means simply that all children who show any evidences of communicable disease ought to be isolated from other children until the nature of their illness has been ascertained. It should be particularly noted that no effort is to be made by the teacher to identify a given contagious disease. In fact, we shall not even name the various contagious diseases in this article. All that the teacher has to do is to observe signs which should be evident to any observant adult and whose recognition has nothing to do with a medical or even a nursing training.

The symptoms which indicate the immediate removal of a child from contact with its fellows are as follows:

fever	nausea, vomiting or diarrhea
watery eyes	unusual pallor or flush
running nose	abnormal irritability or lassitude
cough	abnormal perversity or sensitiveness
pain	
skin eruption	

Any observant, well-trained teacher will have no difficulty once she has become acquainted with her pupils, in observing deviations from normal behavior in any one individual. Such deviations are likely to indicate oncoming illness. Oncoming illness in children is more than likely to be of a contagious nature. Prompt removal of such a child from classroom and playground contacts will greatly minimize the spread of disease from that source. Even if the illness proves to be not communicable, the early isolation has, nevertheless, been of service. It has given the sick child early attention and, therefore, a better opportunity for recovery. It has confirmed in the minds of teachers, children, and parents the principle of isolation pending investigation. If the illness does prove to be contagious, then the early isolation has increased by just that much the safety of potential contacts. It has been shown by attendance studies that a great many short time exclusions will not equal or even approach the total time lost by just a few long quarantines.

The list of symptoms above is headed by the one which appears earliest—fever. Many a child with a fever feels well and looks well for some time after the temperature begins to go up. It is, of course, neither

feasible nor desirable to have the temperature of all children taken in every classroom every day. When, however, the first case of contagious disease occurs it is a splendid safeguard to have the temperature of the children taken each day thereafter and promptly to exclude all those with an elevation greater than one degree, in other words above 99.6° F.

The taking of temperatures can be turned over to the nursing service, where such exists, but there is no reason why teachers cannot learn to take temperatures. The equipment required is simple and not prohibitive in cost. Two dozen thermometers, two dozen test tubes, and a test tube rack with two dozen places, plus a glass jar for cotton, a bottle of alcohol, and one of soapsuds completes the equipment. A dozen thermometers will do in a pinch, but more time will be consumed in the procedure.

The technique is simple but exacting. The thermometers are cleansed with soapy water, followed by alcohol. A separate pledget of cotton is used in each solution on each thermometer, then the instruments are placed separately in tubes filled with 70% alcohol. The teacher begins at one corner of the classroom and places a thermometer in the mouth of each of the first twenty-four children, first wiping each thermometer with a clean pledget of cotton. Of course she instructs them first, in case they do not know how to handle a thermometer. By the time she has placed the last thermometer, the first one will be ready to read. Reading a thermometer must be learned by practice, but thousands of intelligent mothers can do it and there is no reason why teachers cannot do likewise. A physician or nurse can easily be found as an instructor.

Temperature readings of children are not recorded unless they involve exclusion, that is, unless they are more than a degree above normal. As each thermometer is read, it is wiped thoroughly with soapy solution and then with alcoholic solution and replaced in the test tube. By the time all of the thermometers have been read and replaced in the test tubes, they are ready to be placed in the mouths of the second group of twenty-four children. Few classrooms have more than 48 children. After a little experience has been acquired, the whole procedure can be carried out during fifteen minutes, which can also be utilized as a quiet or study period. Application of this procedure in the experience of the writer has resulted in finding numerous cases of contagious disease in schoolrooms as much as seventy-two hours ahead of the appearance of symptoms other than fever. The value of this early discovery is obvious. Too much emphasis cannot be placed upon the importance of careful cleansing of the thermometer before it is used again, otherwise it may act as a mechanical vector for the spread of infection.

Early exclusion is not the only principle which the teacher needs to bear in mind. There arises, inevitably, the question of disinfection. Here the teacher must remember that communicable diseases are spread primarily by persons, not by things. It makes a grand impression of activity to scrub floors, windows, walls, and

(Continued on page 50)

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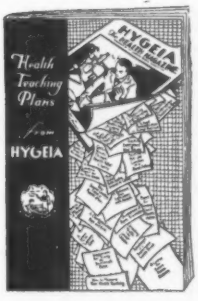

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Touch-Football with the "Kick"

By

L. E. SWAIN

Associate Professor of Physical Education, Brown University

TOUCH-FOOTBALL has become an exceedingly popular game within a comparatively few years. It seems inevitable that it will soon be encased in a straight jacket in the form of rather definite rules. This may, of course, improve the game; but, on the other hand, it will so set it in its major aspects that changes in the future are apt to be made only in minor matters. It seems wise, therefore, to emphasize two points.

The title of this article is both literal and figurative. Viewed from either standpoint, we do not wish to remove the "kick" from the game. Literally, it seems better to have goal posts and thus allow much more variety in the play and also much more practice in a valuable feature of regular football—the intricate art of kicking drops or placements. From a figurative standpoint it adds zest to the game to have this wider range of scoring made a feature.

There is another side from which it seems desirable to consider the question of leaving the "kick" in the game. If interference and blocking are permitted, a certain quality is retained which gives touch-football more semblance to the real thing, and as long as only seven men play on a side and the field is sufficiently large, there seems comparatively little danger of serious injury. We have had the game in this form in play for five years at Brown University in our intramural system with about twenty-five groups participating each fall and have had only one injury severe enough to make it necessary for the man to go to the Infirmary and to cease exercise for several weeks. This would probably have been a very minor injury had not the man gone into the game again almost immediately after receiving the first sprain of his knee.

By the above two methods, using goal posts and allowing some interference, the game is kept much more varied and virile than is the case when some of the more common rules are used. These adaptations are surely much better for students of college age. In the set of rules used at Cornell as printed in the issue of the JOURNAL OF HEALTH AND PHYSICAL EDUCATION for September, 1930, Rule VI, Section III, covers the point of permitting a certain more or less strenuous type of blocking and yet prevents the really dangerous type of leaving the feet and diving under a hard running interference.

This rule reads as follows:

Rule VI

Section III.—There shall be no violent or strenuous blocking; i.e., defensive or offensive player leaving his feet to take out a man. Exception—blocking in line of play. (Penalty, 15 yards.)

As a matter of practical experience our referees at Brown have noted comparatively few cases where there has been objectionable blocking even though we have had no such printed rule to cover the point. In some cases where the players began to be a bit too rough in this respect the referee has warned the player and this action has been sufficient to keep the situation well in hand. It seems to me, however, that this Cornell ruling is wise and does not emasculate the play too much. The playing of only seven men on a side prevents the formation of a large interference.

Our intramural champions have played for three different years with the intramural champions from another New England college where neither kicking nor blocking is permitted. Our own players are very strongly in favor of the two points made in this article as a means of leaving the "kick" in the game and feel that there is no comparison in the two types of play. If any set of rules is drawn up these features should be given most careful consideration in order that touch-football may become a real game for college men. It is quite probable that a modified type might be better suited to boys of the junior high age. Senior high students could well play the more strenuous game such as suggested and as played by our rules, which follow. These may perhaps need elaboration here and there—although we find few complaints or questions arising in actual practice.

Some points in any codification of the rules of touch-football should be elastic and can be so without destroying the type of play involved. Such are the size of the field, and as corollaries the system of downs, the line of kick-off, and the number of men on a side. Also the time of periods or the number of plays to a period could be varied without making much difference to the game.

Touch-Football Rules

(as in current use at Brown University)

1. *Rules,* unless otherwise stated, will be those of regulation football.
2. *Field,* 40x70 yards, with goal posts of regulation size, and end zones. Lines should be marked in field of play at 10 yards and 20 yards from the goal line. (Opponent's 60- and 50-yard lines respectively.)
3. No baseball or track spikes to be worn.
4. *Team* will consist of 7 men.
5. *Kickoff,* by place kick, drop kick, or punt, will be from opponent's 50-yard line and may not be recovered by kicking side unless opponent touches ball or ball crosses 20-yard line of receiving side.
6. *6 downs* will be allowed consecutively. If a touchdown is not scored within this limit, the ball goes to the opponents on the spot of the seventh down.

(Continued on page 50)

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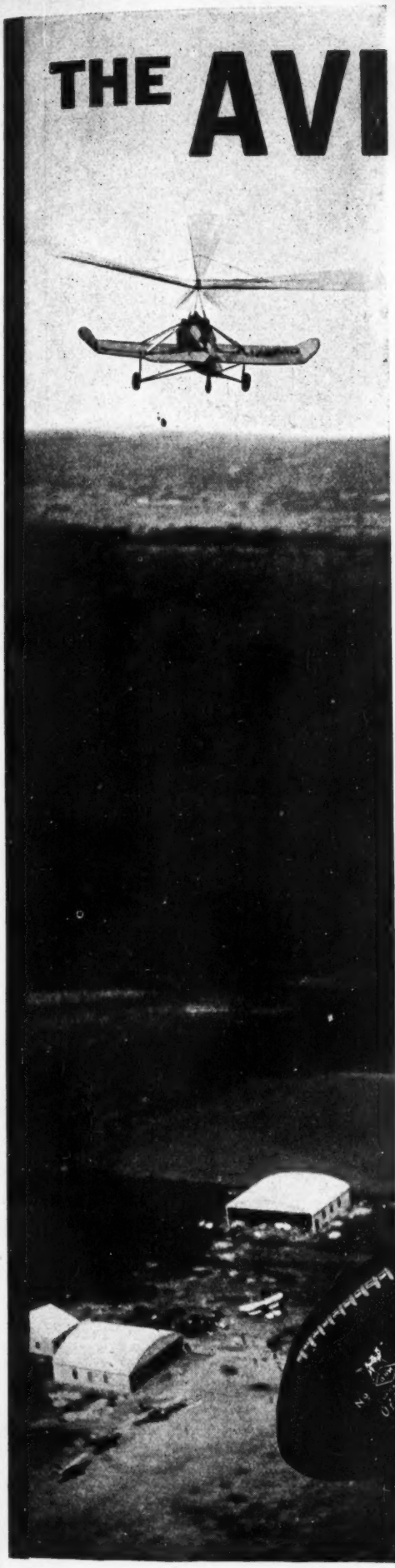

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The test* was conducted on May 28, 1932, by Aeronautical Service, Inc., of Boston. A Kellett Autogiro was used, piloted by Herbert C. Mayer, president of Aeronautical Service. Special government permission had been granted for this test, which was carried out at the Natick-Wellesley Airport, just outside of Boston.

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Pony Boy Chorus

As Presented in the Pageant of the Des Moines, Iowa, Playgrounds

By

BETTY BEAMAN

THE DES Moines Playground Commission closed the summer season by presenting 900 children in a very successful pageant "The Spirit of Playgrounds." The pageant, typical of playgrounds and most entertaining, was presented as a revue of the season's work. It was given amidst the charm of a natural setting in the Municipal Sylvan Theater. Originality and creativeness were outstanding marks of merit, each individual playground working out its own presentation.

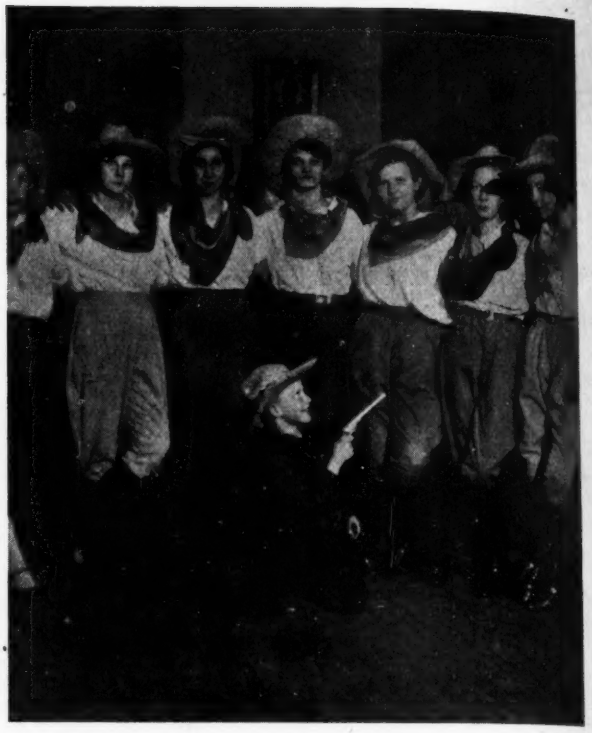
One of the features of the pageant was the "Pony Boy Chorus" presented by Park Avenue Playground. Upon request, the chorus arrangement of "Pony Boy" is published exactly as we gave it in the pageant.

"Pony Boy" is an old dog dance but to my knowledge has never been used as a chorus number. It is very effective, as a large number of girls may take part in it; the steps are simple and the costumes quite different.

We used sixteen girls in the dance, thirteen chorus girls and three soloists.

Costume:

Chorus: Riding trousers, boots (may be made of black oil cloth) white shirts open at neck, various colored large bandanna handkerchiefs around the neck worn low over part of right shoulder with knot in left shoulder, cow-boy hats



(large straw hats, covered with tan cloth and shaped give a very good cow-boy effect).

Soloists: Same costume, only short skirts are worn in place of trousers. Each carries quirt (can be made by covering a stick twelve inches long with oil cloth and fringing end to give quirt effect).

Music:

"Pony Boy" music may be bought from Jerome H. Remick & Company, New York.

Entrance:

Play an introduction long enough to get chorus and soloists into center of stage.

Dance:

Play verse and chorus in order twice and an extra chorus.

Chorus: Enter with stiff kick steps, right hand on each shoulder of girl in front.

Soloists: Entrance same step. Are about six feet in front of chorus. Enter a few measures behind chorus. All turn and face audience.

Step I

Chorus: Seven cutting steps with left foot forward and right foot back. Arms over shoulders of girls next to them. Four three's beginning right foot.[1] Repeat with right foot. Repeat all.

Soloists: Same step in front of chorus. Carry quirts in both hands quite low.

Step II

Chorus: Step back on left foot. Step back on right foot, turn face other direction and walk forward left and right. Two three's weaving back a half turn left and two three's forward left and right. Four stiff kick steps beginning left and

(Continued on page 49)

1 A "three" is a term of a step used in clog dancing. To do a "three" you brush the foot forward, brush it back, and step on it. Four three's means that everyone does a "three" beginning with right foot, does it four times (right, left, right, left). Two three's, etc., means everyone does a "three" on left foot, a "three" on right foot, turns a half turn left and does a "three" on left foot, a "three" on right foot walking toward back of stage.

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AROUND THE COUNTRY

WITH J. E. ROGERS

The California Association of Health, Physical Education, and Recreation, says its president, Charles W. Davis, has decided to adopt an intensive campaign for water safety during the spring months. This idea is appealing to a great number of cities at the present time. Learn to Swim campaigns, special life-saving courses, special water safety instruction periods in connection with the health education program in the schools, have been particularly stressed this past spring as the result of the action of the California Association. The letter from Mr. Davis goes on to state, "Only yesterday, a Berkeley boy, Edward Kemp, fourteen years old, and a student at Burbank Junior High School, while vacationing at Antioch over the week-end, rescued a girl who had stepped into a water hole. He brought her to shore and, with his knowledge of the Schaeffer Method, gleaned, as he frankly admits, from his course taken during the Learn to Swim campaign, resuscitated the girl. This one concrete instance has made us feel that our efforts on behalf of the 1,300 youngsters who enrolled in our Learn to Swim campaign and life-saving instruction, were well worthwhile.

* * *

Earl A. Pritchard, who has long been identified with the play and recreation movement, has taken his doctorate degree at New York University.

* * *

Our good friend, Mr. A. E. Kindervater of St. Louis, over fifty years in physical education, who was given an honor award at Detroit, was recently director of a great play pageant. The slogan was, "A Game for Every Child, and a Child for Every Game." Two bands furnished the music; 8,000 boys and girls took part; 60 teams were on the field at the same time; the entire program was on a ten-minute schedule—one group was on the field as the other was passing off; 9 numbers in 90 minutes—it moved like clockwork.

* * *

In Florida an accredited high school which meets the state standards set up by the State Director of Physical Education will be allowed one credit for college entrance. A few high schools are now on the list.

* * *

Special mention at this time must be made of some of the new state courses of study. Everyone in all the fields of education is working on curriculum, and changes in procedures and methods are rapidly taking place everywhere. Here are but a few which have passed over my desk recently that are outstanding.

1. For years there has been an insistent demand for good health education or hygiene teaching material for the senior high school grades—ten, eleven, and twelve. I believe Dr. D. Oberteuffer, State Director of Ohio, has made such a contribution in his fine new course of study, *Health and Physical Education Series of the State of Ohio Department of Education, a Program for Junior and Senior High Schools.* Oberteuffer has done a very fine job in this field for which he is qualified. If anyone is looking for a good course of study in health instruction or hygiene teaching for the upper six grades, he should get if possible a copy of this book. The material on physical education is also good but it is the health material that is a distinct contribution to curriculum building.

2. Another good job comes from Arthur V. G. Upton, State Director of West Virginia, who has just published a splendid *Manual of Physical Education for Elementary Schools.* This manual is a teaching text particularly for the classroom teacher and for the small schools, especially in rural districts. It makes, therefore, three distinctive contributions—

a. It is a teaching manual especially for classroom teachers.

b. It is a helping text in organization, conduct, and administration of physical education programs.

c. It is of particular value to rural and small town schools.

3. Alabama, likewise, has just produced a splendid practical elementary school teaching text. State directors realize that their manuals must be practical teaching texts.

4. Major E. V. Graves, State Director of Virginia, in September, 1931, published a very helpful *Brief Outline of Physical and Health Education for Elementary Grades.* This contains material in set-up and organization of school programs.

5. Dr. A. G. Ireland, State Director of New Jersey, is always getting out excellent small pamphlets on different phases of the physical and health education program. In the field of health he has published some very worthwhile material. A recent bulletin on *Gymnasium Planning and Construction* is most helpful and practical.

* * *

Dr. W. G. Anderson of Yale University is retiring from active service after being connected with that famous institution since 1892—forty years in active service in the same institution. Dr. W. G. called the first meeting of the A.P.E.A. in 1885. He has been a pioneer in our profession and was given an honor award by the National Association at Detroit. His brother, Dr. Henry S. Anderson, is also retiring after forty years of service at Yale University.

* * *

Credit for Physical Education—In Missouri health and physical education shall be given in each of the four years. If the teacher possesses standard qualifications, health and physical education may count as one unit of the sixteen; otherwise it is to be given without credit.

* * *

Superintendent D. J. Kelly, Binghampton Schools, New York, writes to Dr. Thomas D. Wood, Teachers College, Columbia University:

"In these times of depression and economic readjustments, we have had one very encouraging and refreshing experience showing that it is possible to establish relative values in matters educational.

"We, in common with other places, found unusual limitations in school finances which required certain curtailment in our program and activities. In discussing this with our Board of Education, the Board through its president instructed me to make such retrenchments as I felt necessary but that I should make one exception, namely, in the school health program. No cuts or curtailments were to be made in that work. The president of the Board states, and the other members agree with him, that our work in health is fundamental at all times but during a period of depression it becomes far more vital to the welfare of our children. We have regarded this as one of the strongest endorsements that has ever been given our school health program."

In Trenton, New Jersey, many supervisors of special subjects were cut out. It is significant that the supervisor of health and physical education was maintained. Of all the directors, W. E. Short was the only one that was retained. This was largely due to the fact that he has identified himself with all the interests of Trenton. He is more than a school man; he is a community leader.

* * *

Martin A. Rodgers, author of that splendid volume "A Handbook of Stunts," Macmillan, is head of the Department of Health Education, Jamaica Teachers Training College. The three former city normal schools supported by the Board of Education of New York City have recently been converted into degree-granting Teachers Colleges.

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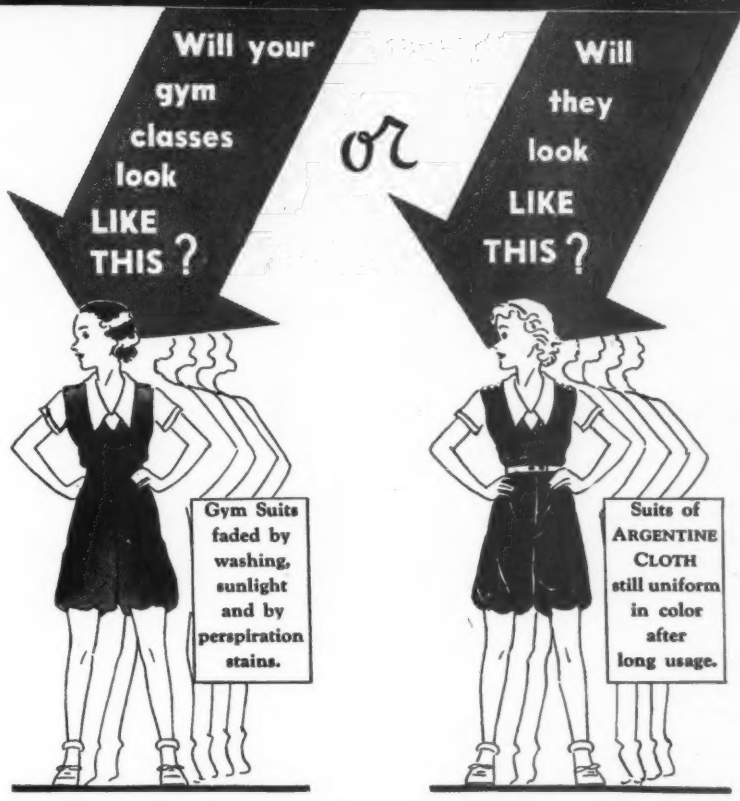
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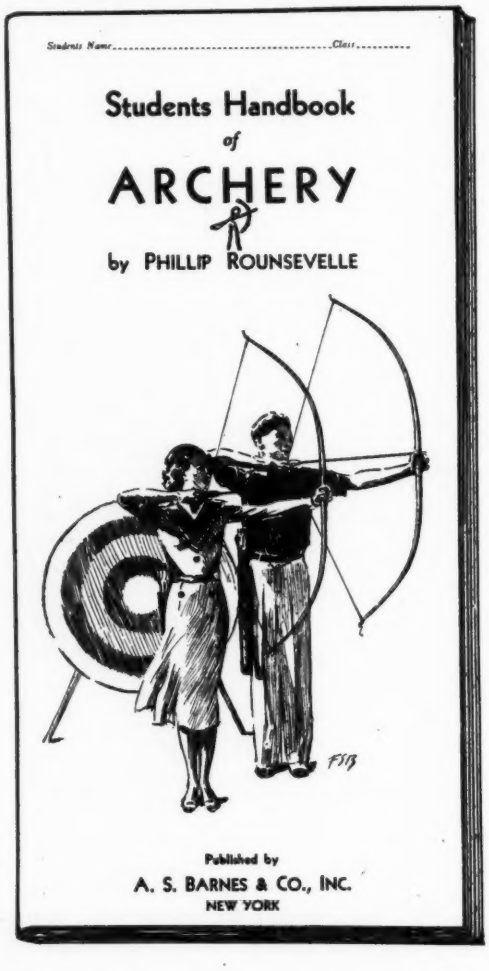

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The Play House

A Part of Play Day

By

HELEN WESTFALL

Director of Physical Education, State Teachers College, Mayville, North Dakota

Play Day

When old and young participate
In games and songs together,
My Dad meets yours and chats too late
On crops, and hay, and weather,
Ma talks about her last new quilt,
And sister does the Irish Lilt,
Your brother stumbles in the race
But manages to take first place,
With ice cream cones and candies sweet
We journey home the day complete.
And oft' in traveling on our way,
We shall recall the fine Play Day.

MANY counties in North Dakota sponsor play days for rural, consolidated, and town elementary schools. In most cases the program involves activities in music, dramatics, and athletics for grades four to eight inclusive. Parents, adults, pre-school children, and boys and girls up to the fourth grade have in the past not been considered in the plans for the day. Consequently, a great number are completely fatigued before the day is over, leaving early with a disagreeable impression and dubious as to the value of the repetition of "such a performance." To alleviate this unsatisfactory situation, "The Play House" was created as an experiment to find some means of providing activity for the pre-school children and the boys and girls up to the fourth grade. This experiment was conducted as a part of the Traill County Play Day, in Mayville, North Dakota, last May.

The Model Rural School building, located east of the college gymnasium, was selected because of its accessibility and was rejuvenated into the fantastic "Play House." Temporary, artificial partitions marked the room into four divisions. Every room had girls supervising the activity or work at all times of the day, and one girl was in general charge of the whole house to act in the capacity of Hostess.

Number one, the large Play Room, contained a large collection of colored Indian pictures, a wide variety of stuffed birds native to North Dakota, ABC blocks, Lincoln Logs, dolls and doll beds, small toys, blackboards, chalk and erasers. Story hour was held in this room from eleven to twelve o'clock. Stories and circle games under the direction of Mrs. L. P. Parish filled the hour brim full of fun for over one hundred small boys and girls. The success of this project could be evidenced by the request for more stories in the afternoon.

Number two, the Construction Room, smaller than the Play Room, with many windows for light, was equipped with a long table, boards from apple and peach boxes, empty thread spools, hammers, nails, coping saws, glue and paint. This was the busiest place of all. Small boys and girls made door stops in the likeness of dogs and cats, bird houses, tables and chairs for dolls, doll beds, and perambulating toy dogs. The bird houses completed, gave the greatest opportunity for expression of joy and pride to the makers.

Number three, the Rest Room, with windows for light and ventilation, was furnished with two cots, pillows and home-made dogs and cats. Several small babies were able to sleep and rest during the day. One first-aid case was brought in and cared for very efficiently. Many mothers were relieved and made happier because of this room.

Number four, the Children's Library or Reading Room, was attractively decorated with tables, chairs, and book cases made from peach boxes, painted green and orange. The chairs were cushioned with cretonne in keeping with the color scheme. Picture books made by the children of the first grade of the Mayville city schools and story books loaned by different members of the community were the main features of this room.

From eight o'clock in the morning until after five o'clock in the afternoon the Play House was alive with children. An accurate check on attendance was not taken, but by counting every child that entered and took part in some activity in the house, from one hundred to over three hundred children were accommodated an hour during the time that the house was open. The

(Continued on page 63)

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Special One-Year Course: Specializing in massage and corrective gymnastics

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It May Interest You to Know---

THE National Convention will be held in conjunction with the Southern District meeting at Louisville, Kentucky, April 26-29, 1933.

The Eastern District Convention will be held at Springfield, Massachusetts, April 5-8, 1933.

The Midwest District Convention will be held at Wichita, Kansas, March 27-April 1, 1933.

The Northwest District Convention will be held at Spokane, Washington.

* * *

THE new officers of the Massachusetts State Society are as follows: President, Thomas Hines, Public Schools, Brookline; Vice-President, Florence Dial; Treasurer, Helen M. Dauncey; Secretary, Ruth C. Duffey, Medford.

* * *

DURING the past year the sub-committee on publicity, of the Women's Athletic Rules and Editorial Committee of the American Physical Education Association, has edited seven books of rules of activities of women and girls. Five of these are revised and enlarged and two of them are new and worth special attention: *Aquatics for Women and Girls,* 125R, and *Women's Winter Activities,* 124R. In the basketball rule book there is to be found also the platform and policies of the Officials' Rating Committee. These books contain not only the authoritative rules, but also various articles on proper coaching, equipment, and sports ideals.

* * *

FOUR very fine booklets have been published by the Division of Physical and Health Education of New Jersey. They are *Gymnasium Planning and Construction, Self-Testing Activities, Self-Testing Activities and Contests,* and *Play Days.*

* * *

THE first Institute on Health Education to be conducted by the Public Health Education Section of the American Public Health Association will be held at the Hotel Willard, Washington, D.C., October 22, 23, and 24, 1932, immediately preceding the annual meeting of the Association, which opens Monday, October 24. The purpose of the Institute is to provide instruction in the content and methodology of health education to a limited number of persons actively engaged in health education.

For the sessions of the Sixty-first Annual Meeting of the American Public Health Association, which follow the special Institute, a comprehensive program covering every current problem in public health administration and technique has been arranged. Each of the ten sections of the Association will hold individual meetings. Additional information about the Health Education Institute or the annual meeting program will be supplied by the American Public Health Association, 450 Seventh Avenue, New York, N.Y.

* * *

THE JOURNAL readers will be interested in knowing that the $500 scholarship offered by the Massachusetts Institute of Technology through the American Physical Education Association has been awarded to Miss Lorna Mulder, 822 Rose Street, LaCrosse, Wisconsin.

* * *

R. N. SANDLIN, Supervisor of Health and Physical Education in Texas, has published Bulletin No. 289 entitled *Physical Education Program and Suggestions.* This bulletin was particularly gotten out for the small rural junior and senior high school. Suggestions are made as to how the high school of small enrollment and limited faculty can find the ways and means to develop a physical education program.

THE North Central Association of Colleges and Secondary Schools recommends that three units in English, two units in social science, one unit in biological science or one in general science, and one unit in physical education or health (with or without credit) be required for graduation for all students in the four-year high school.

* * *

THE American Legion is very much interested in physical education. Here is an extract from a speech by Russell Cook, National Americanism Director. "Realizing that physical development among the youth of the country is way below par, ... state departments have been asked to start campaigns on character building, and physical development in the schools of their respective states. The Legion favors a minimum program of compulsory physical education in the public schools which will require at least one hour per day for three days a week or its equivalent. Legislation to bring this about will be sought by the Legion in all states where such laws are not now operating."

* * *

PHYSICAL education teachers in Philadelphia are now teaching practically all courses in health education in the senior high schools.

* * *

THE new officers of the California State Society are as follows: President, Charles W. Davis, City Director of Physical Education, City Hall, Berkeley; First Vice-President, Robert E. Monsey, City Director of Health, Physical Education, and Recreation, Santa Monica; Second Vice-President, M. H. Trieb, Assistant Director of Physical Education, Los Angeles City Schools, Los Angeles; Secretary-Treasurer, Mrs. Graves, San Francisco.

* * *

THE Metropolitan Life Insurance Company has issued another bulletin in its interesting series of "Health Heroes." This one contains a brief, simply written biography of Robert Koch by Grace T. Hallock and C. E. Turner. Teachers will find it useful as a supplementary reader and they may obtain five free copies by writing to the School Health Bureau, Welfare Division, Metropolitan Life Insurance Company, 1 Madison Avenue, New York, N. Y.

* * *

THE Massachusetts State Department has just completed a new course of study in Health Education for Elementary Grades. A committee is also at work preparing a course of study in Physiology and Hygiene for Junior and Senior High Schools.

* * *

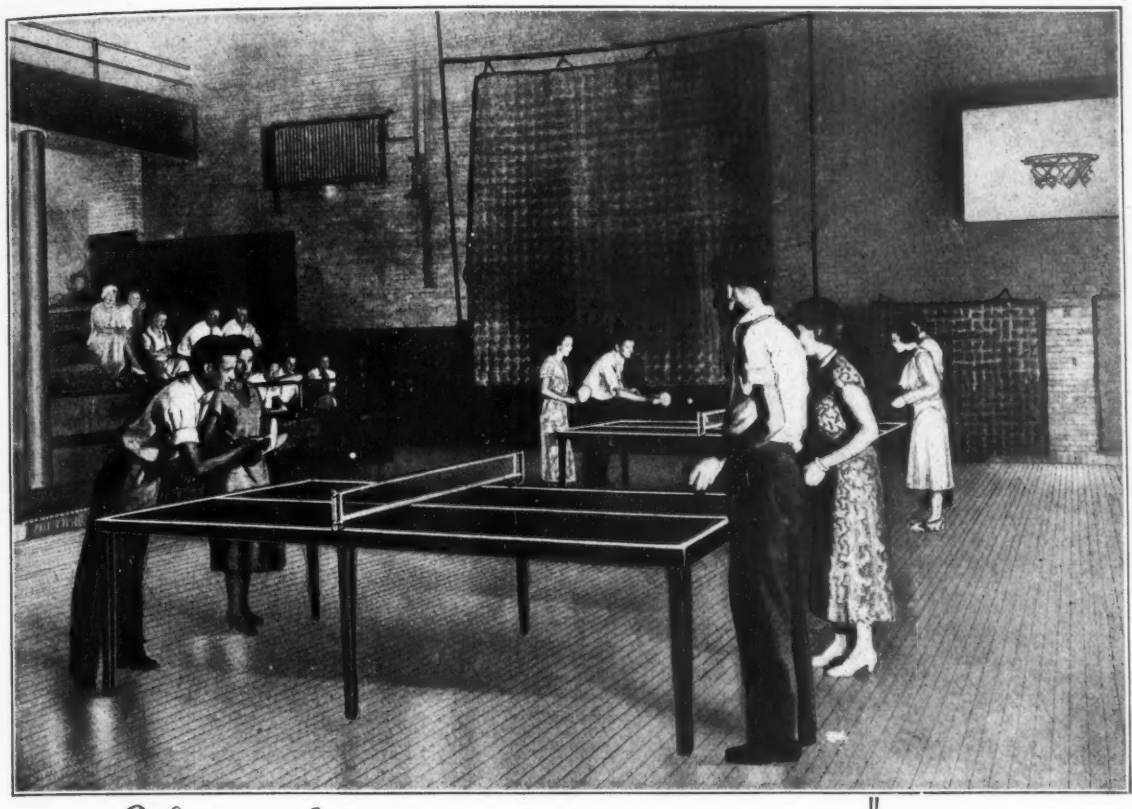
ACCORDING to a recent news letter of the National Physical Education Service, the New York State Public High School Athletic Association has taken action to abolish not only state basketball tournaments, but all state "championships." Mr. F. R. Wegner, Secretary of the New York State High School Athletic Association, Little Falls, New York, is quoted as follows: "The Association is fostering a wider athletic and physical education program for boys and girls, through the stimulation of intramural activities and determining principles which will aid the schools in setting up interscholastic contests on the basis of 'equality of competition.' Believing in the educational principle 'learning by doing,' the Association is encouraging and fostering schools to use this principle of conduct in interscholastic games, so that 'winning' as the object of the game may be supplemented with the more worthwhile objectives of play."

* * *

RECENT tests conducted by the Medical and Physical Education Department at Barnard College, and made public by Miss Agnes Wayman, Head of the Physical Education Department, show that the mythical freshman, a composite of measurements and statistics, is stronger, taller, and altogether sturdier than her predecessor of ten years ago. Measurements reveal that the girl who would graduate in 1935 is more than half an inch taller than the graduate of 1925. Miss 1935 weighs

(Continued on page 44)

NOW . . . that old Game Comes to Life In the School Gym !



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Offers all the Advantages of a Major Sport. Players and Spectators - old and young alike - are enthusiasts.

What other sports activity will give your students the keen enjoyment—whether they are players or spectators—as is derived from a fast game of Table Tennis played on a Durabilt Steel Table? It is truly a game that appeals to all. It is economical. No large outlay of money is required for equipment. Can be played indoors or outdoors.

Many Coaches are holding tournaments during the noon hour in which hundreds of students participate. We have a plan whereby you may be able to provide Durabilt Steel Tables at a very slight cost to your school. Write us for complete details.

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8 POINTS OF SUPERIORITY

1. Special rust resisting treatment under durable finish makes this an all-weather table.
2. Folds compactly in half — Legs fold under table. May be separated in half for easy portability.
3. Resiliency — Reinforced steel top gives resiliency.
4. Attractively and durably finished in a dark satin texture green — easy on the eyes.
5. Playing Quality—takes chops, cuts and spins — Surface has correct "bite." Very Quiet.
6. Steel construction throughout with enough weight to make it "stay put."
7. Indoor and Outdoor Table—may be used for all table purposes.
8. Strength — substantially constructed — far in excess of any table requirements. Will not warp, chip, splinter, crack, split, nor curl—a perfectly level, playing surface.

It May Interest You to Know---

(Continued from page 42)

a little more, has a stronger grip, a larger lung capacity, and a greater chest expansion than her fellow student of a decade ago. The class of 1935 is also much more proficient in passing tests of athletic skill.

* * *

THE following statistics taken from a recent bulletin, "American Education During 1931," published by the U. S. Dept. of the Interior, may be of interest:

Annual Expenditure for Education	$3,200,000,000
Pupils in Public Elementary Schools	21,211,325
Pupils in Public High Schools	4,354,815
Pupils in Institutions of Higher Learning ...	1,099,468
Pupils in Parochial and Private Schools	2,700,000
No. of Teachers in the United States	1,029,000

Other figures show a surprising decrease in the number of children in the United States under 5 years of age when the years 1930 and 1920 are compared; a considerable amount of important State Legislation regarding school budgets and expenditures; an emphasis on conserving local autonomy and local responsibility; and a more definite knowledge concerning teacher supply and demand which shows that every year in every school there is an average of 1 new teacher to every 5 teachers in the school and in rural areas 2 new elementary teachers for every 5. In addition the enrollment in vocational schools and courses totalled approximately 1,125,000 pupils of all ages, an increase of 60,000 over 1930. From 1918 to 1931 enrollment in vocational schools federally aided has increased almost ten times.

In regard to colored education there are 3,326,482 children of school age of which 1,000,000 are not in school. Of those enrolled, more than one-third are in the first grade and 74 per cent below the fifth grade. Only 3.7 per cent are in high school.

The schools have coöperated with the Presidents' Organization on Unemployment Relief by increasing school attendance and thus decreasing the number of boys and girls 16 to 17 years of age who would otherwise be competing with adults for employment.

In relief work, the schools have co-operated in many ways, including the factors of school luncheons and careful safeguarding of the nutrition of school children. Also, the White House Conference has been very active during the past year in furthering state conferences and disseminating publications concerning the health and education of the child.

* * *

DR. CHARLES B. Davenport, Director of Department of Genetics, Carnegie Institution of Washington, says:

"Rapid growth costs the body heavily.

"It requires more food and the ability to assimilate it. The long bones grow fast and put a strain on the muscles and ligaments. The boy or girl is conscious of bodily maladjustments which are reflected in awkwardness and in a feeling of psychological maladjustment."

"Because the child has an extra burden to bear during his rapid growth, he should be relieved as far as possible of other stresses.

"Instead of that we put him under the strain of entering high school, of competitive school sports, of additional social activities. Extra pressure is brought to bear on him just when the pressure should be lessened."

"It is no wonder that under our system so many adolescent boys and girls break down with tuberculosis or show signs of mental maladjustments."

Children gain faster in weight in the fall and winter than they do at other times of the year. Gains in height come in the late spring and early summer.

* * *

COACHES of basketball may obtain a pamphlet of basketball shot charts and scouting diagrams by writing to the Huntington Laboratories, Inc., Huntington, Indiana, and asking for the Seal-o-San booklet.

COMMENT ON THE DANCE SYMPOSIUM

By

EUPHEMIA FOSDICK,

Eastern High School,
Washington, D. C.

THE DANCE symposium[1] sponsored by several of the prominent eastern universities has provoked interesting comment. Dancers and educators look upon this symposium as an event of significance. Educators striving for academic recognition of the dance seem to have "arrived." An unsigned article in the *Dancers' Club News*[2] congratulates the colleges on their recognition of the dance but objects to the fact that the college dance instructors are physical directors rather than dancers, and thus more concerned with physical activities as such, rather than the art of the dance.

In the true sense the physical director is concerned not only with the physical self but with the "whole man." She is concerned primarily with individual and group education through the medium of physical activities. She is, however, more concerned with the concrete physical basis than is the dance artist. The ideal dance teacher is the artist-educator. Such a person is rarely found. Life is short and contributions must be made during our active years. College instructors must have adequate college background. Their dance instruction has often been wrested in bits from the college course and supplemented by hasty, unassimilated summer courses. School time to perfect dance skills or to delve into dance research problems was unknown but a short time ago. Often the dance was not studied at all until one was fairly mature. That precious plastic period of youth was often lacking in dance stimulus at the time of the adolescent period of the present college instructors. Though these instructors are of "no ancient vintage," general, intelligent dance interest and realization of the dance as a tool of education is comparatively new in this country. The efforts of these instructors to get academic recognition for the dance may enable their students, and successively *their* students, the award of time and credit for skillful execution and scholarly research in the dance field. With this recognition and consequent thorough work the college will probably be able to refute the criticism of a dance that is "hopelessly exterior."

If conditions are such that the present day college dance instructor has opportunity for further study she may look to the dance studio for dance skill and artistic presentation and sometimes even motivation, while the dance studio may look to the college for purpose, aim and objectives. If we want educated dancers rather than trained dancers, the efforts of both the studio and college are needed.

---

[1] "A Successful Dance Symposium," Agnes Wayman, Barnard College. THE JOURNAL OF HEALTH AND PHYSICAL EDUCATION. April, 1932. Vol. III, No. 4.

[2] "Our Colleges and the Dance," DANCERS' CLUB NEWS, March 12, 1932. Vol. III, No. 3.

"The New York Wigman School of the Dance is dedicated to the development of Dancers, Teachers and Amateurs, and to those thousands, untutored in the rich speech of the body, who might gain in life through physical and emotional exercise. Our language is the dance. Our method is the transformation of the body from mere body to instrument."

—MARY WIGMAN

Under Mary Wigman's personal supervision...Courses for dancers, amateurs and teachers at the only official American school to teach the Wigman method of the modern dance...Hanya Holm chief instructor.

Fall term starts Oct. 3rd
Enroll Sept. 26th-Oct. 1st
Daily classes during September . . . .

NEW YORK
WIGMAN SCHOOL
OF THE DANCE

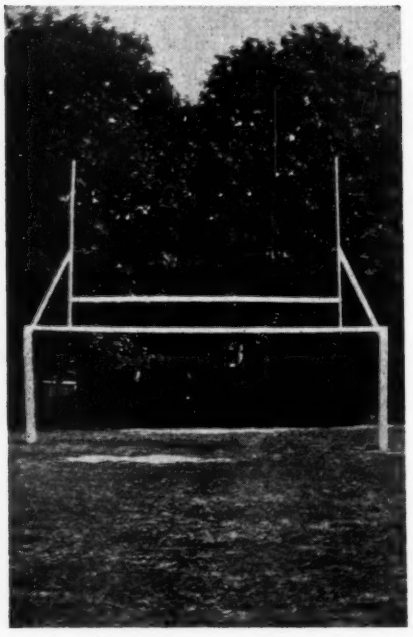
113 West 57th Street, New York City

"How We Do It"

Combination Soccer and Football Goals

DIRECTORS of physical education have long felt the need for a type of goal post that could be used interchangeably for both soccer and football. Many kinds of movable goal posts have been constructed but none have proven entirely satisfactory. Unless the posts have roller devices they are very cumbersome to move, and even those with roller devices have had to have special bracing to maintain the posts in upright position.

At our school in Oyster Bay, New York, we have devised a combination set of goal posts which have proven very satisfactory. A pair of these goals have been in use for over five years for both soccer and football. They are particularly useful in giving tests of ability in physical education classes when one wants to give tests on the fundamentals of the two sports.



View of combination soccer and football goal ready for play

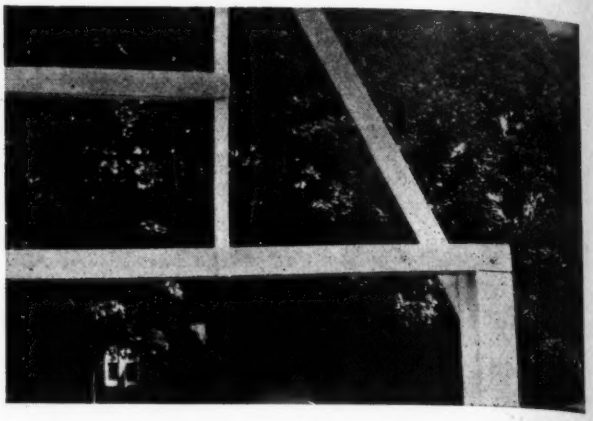
Specifications

COMBINATION SOCCER AND FOOTBALL GOALS FOR ONE GOAL

Uprights	8″x6″x11′
Soccer Crossbar	4″x4″x25′ or 2—2″x4″x25′
Football Crossbar	2″x4″x18′10″
Football Uprights	2—2″x4″x13′
Bolts	2—½″x10″ with washers and square head
Side Braces	2—1″x3″x4′
Metal Braces	2—J-shaped with following dimensions: Stock 1½″ wide x ¼″ thick; long side 4′, short side 2′, bend 4″. To be drilled at 6″ intervals and countersunk for wood screws.

Details of Assembly

Dress all lumber and paint with two coats outside white paint. Uprights should be painted for 8′4″ of their length and the remainder creosoted. Cut a 4″x4″ notch from the top of each upright and drill ½″ hole through post at the center of this notch. Insert posts in holes in ground, true with spirit level, and fill in holes while washing dirt in with a hose to pack this fill. These uprights should be inserted with their 6″ face towards the field of play. (This post when dressed or planed will be not over 5″, the maximum width under the rules.)



Close-up of diagonal braces

Next bore ½″ holes in the 4″x4″x25′ piece two inches from each end and place this bar in the notches in the uprights and fasten with the bolts and washers mentioned in the specifications. If square-headed bolts are used it will be found easier to take these goals apart. The goal as it now stands is a soccer goal.

The addition of the remaining pieces makes it a combination goal for either soccer or football with no interference for the enjoyment of either sport.

Next place the 2″x4″x13′ pieces on this soccer crossbar so that they are 18′6″ apart and with the 2″ side facing the field of play. These are secured to the soccer crossbar by the J-shaped metal bands that may be obtained from any blacksmith.

The 2″x4″x18′10″ is next put on these football uprights 2 feet above the soccer crossbar. This football crossbar may be bolted on, screwed on, or put into a notch and then screwed on. (We used this latter method.)

The last step is the addition of the diagonal braces to the back of the goal as it is clearly shown in the picture.—*By H. Nelson McElroy, Oyster Bay High School, New York.*

Floor Hockey

An adaptation of ice-hockey techniques to indoor conditions; a game for elementary and secondary school boys.

IN many communities facilities for skating are limited to a very brief period during the winter months, while in others a frozen pond or artificial ice is a rarity. To teach the fundamental skills in the playing of ice-hockey without the use of ice may present a problem to many physical educators and, because of this limitation, floor hockey was organized and introduced. Handling the stick, maneuvering the puck, position play, and team co-ordination may all be taught without the use of ice, thus equipping individuals with some knowledge of the techniques involved so that as soon as possible players may engage in the actual game of hockey out-of-doors. However, since the first introduction of floor hockey as a substitute for the teaching of skills and team play for the game out-of-doors, it has grown to be a very popular game itself. Teams are composed of six players, namely: goal-keeper (located in front of goal); right and left guard (occupying middle line); center forward, and right and left forwards (occupying front line).

The problem of goals for the indoor game was settled after much experimentation by the introduction of a very low framework made from one inch (inside dimension) galvanized pipe. The size and shape of the goal presented a problem and the following dimensions have proven most satisfactory; seventy-two inches in length, six inches in height. The goal is placed upon a six-inch wooden square base. This framework can be assembled by any plumber for approximately $1.50. The wooden base prevents constant turning over, while the low area of the goal requires the players to keep the puck sliding along the floor, thus helping to prevent an injury from a flying puck.

The puck is the same size as the regulation ice-hockey puck

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First because New VALVE Control
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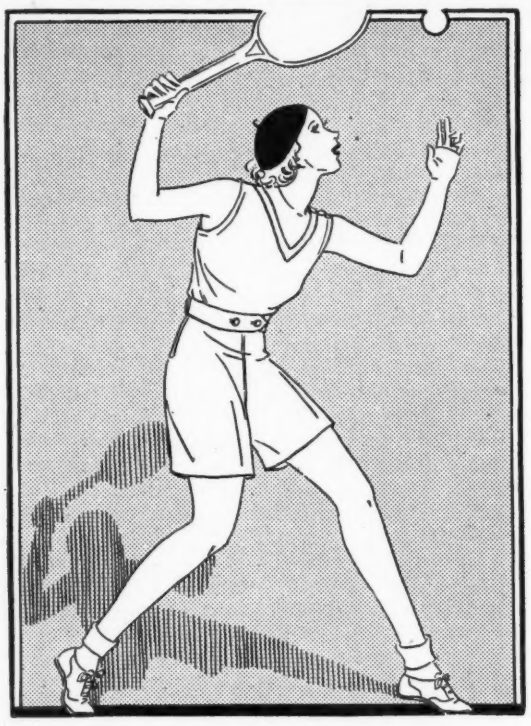


"—inspiring alike to teacher and class"

Physical Directors indorse the one-piece gym or play suit of Indian Head Cloth because it is lighter, neater and WASHABLE. It can be identified by this label

LIC. No.
INDIAN HEAD
REG. U. S. PAT. OFF.
CLOTH
GUARANTEED GARMENT
COLORS GUARANTEED FAST

Indian Head Colors are FAST—the cloth is sturdy, and the Permanent Finish comes up crisp and fresh after each ironing.

The fascinating range of Indian Head ***Fast*** Colors enables each class to choose its own—an aid to class spirit. The bright, cheerful colors are a delightful stimulus to the routine of indoor exercise. And the simple one-piece garments, being easy to wash and iron, are always crisp and fresh—inspiring alike to teacher and class.

Gym suits of Indian Head Cloth carrying the label may be had from these manufacturers:

New York City
S. M. Elowsky & Co., Inc.
Kenilworth Mfg. Co.
Sally Middy Co.

Chicago
Dainty Frocks Co., Inc.
Northwestern Garment Factory

Grand Rapids
Globe Knitting Works

Kansas City
Lowe & Campbell Athletic Goods Co.

Philadelphia
Gretz & Schwartz

St. Paul
Simon & Mogilner

Troy, N. Y.
Marvin-Neitzel Corp.

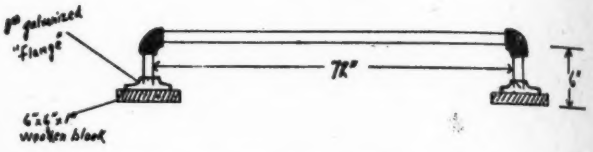
Samples of the 31 Fast Colors sent free on request to

Nashua Mfg. Co.
Incorporated 1823
Box 1206, Boston, Mass.

but for the purpose of the indoor game, the puck with a hole in the center, giving it a doughnut shape, is more satisfactory. This allows for reduction in the weight of the puck, as well as adding to its resiliency. The puck described here and used in the game can be purchased from distributors of sporting goods under the name, "floor hockey practice puck."

Sticks may be of varied length and type depending upon one's experience. The regulation ice-hockey stick was first used, at which time the handling of the stick was emphasized, but with the growing interest and demand for the indoor game various types and lengths were used, until at present a very light ash stick is provided for the players. All players in the game use the same type of stick. "Roller polo" sticks have been satisfactory for the elementary school, while the junior size hockey sticks are used in the upper school. Sticks can be purchased for a price that ranges from thirty-five to eighty-five cents, and for the indoor game will last indefinitely. It is advisable to tape the regulation ice-hockey sticks before using so that splintering may be prevented, from both a safety and economical standpoint.

Goal Used



Most boys have experienced at some time during their young lives the game of "shinny" and the indoor game or "floor hockey" in many ways represents the organization of this great pastime. One, two, or three games may be played simultaneously, depending of course upon the size of the gymnasium or playroom. The goals are placed at opposite ends of the playing area, and should be set from three to five feet from the end walls in the center of the allotted space. This placement permits the players to pass the puck around and behind the goal. One point is scored for each goal, and the game may be divided into three periods, halves, or quarters, depending upon the age of the participants and the length of the class period.

Floor hockey offers an opportunity as found in basketball and volleyball for the organization of intramural leagues during the indoor season. As is true in all games, the simpler and the smaller the number of rules the speedier is the adaptation of the player to the game. In floor hockey the following rules were set up to meet the present situation of both game and facilities. In another situation it may be necessary to either add to or change these rules, but the principle of simplication should always be foremost in the mind of the administrator.

Floor Hockey Rules

1. The game is started by dropping the puck in the center of the floor, designated as the playing area, between the sticks of the opposing center forwards.
2. The puck may be stopped by any part of the body, but may not be carried, held, knocked on, or kicked. The goal keeper may kick the puck away from his goal as a defensive move.
3. No player shall raise his stick above his hips or throw it along the floor. Charging, tripping, kicking, or pushing an opponent shall not be allowed, and a player shall be ruled off the floor for such tactics.
4. No player may lie, sit, or kneel on the floor in front of his goal, nor place the full length of his stick on the floor in front of his goal.
5. For infringement of the above rules a player shall be dropped from the game for a period of one, two, or more minutes, no substitute being allowed to take his place.
6. If the game is stopped by the referee except at the end of a period the play shall be resumed by dropping the puck between the sticks of two opposing players at the point where it was last played.

Note: In gymnasiums where obstructions such as apparatus and stall bars may cause the losing of the puck, the referee stops the game, recovers the puck, and resumes play as desig-

nated under rule six. Other methods which may be utilized in placing the puck in play are: (1) "bullying off" in which the puck is placed on the floor and two opposing players cross their sticks three times following which they may play the puck; (2) placing the puck on the floor with the sticks of the two opposing players placed firmly against the puck, and at the sound of the whistle players either pass or gain possession of the puck. Either or these two methods of placing the puck in play is more satisfactory than dropping the puck because they prevent the sudden swinging of the sticks.—*By Colba F. Gucker and G. F. Loebs, Lincoln School, Teachers College, Columbia University.*

Pony Boy Chorus

(Continued from page 36)

stamp left—stamp right. Four three's in a circle to left. Repeat whole step on same foot.

Soloists: First soloist: Step side right, moving to right. Step back left across right. Step side right making a quarter turn, step forward left. Two three's beginning right, moving back a half turn left and two three's forward right and left. Repeat whole step moving back to place in center of stage.

Second soloist: Moves toward back of stage with chorus. Repeat moving back to place.

Third soloist: Moves in opposite direction from first soloist beginning on left foot. Repeats moving back to center.

Step III

Chorus: Three three's and two jumps (feet apart, feet together). Repeat three times more (last time instead of two jumps run forward two steps, right and left).

Repeat Step I left and right. *Soloist:* Same.

Step IV

Chorus: Tap heel on floor twice (pawing motion). Two three's left and right.

Repeat

With weight on right foot, hop to the left four times swinging free foot in back, in front, back, and in front. Two three's left and right. Stamp right foot in front and in back, keeping weight on left foot. Repeat all. *Soloist:* Same.

Step V

Chorus: Repeat Step II. *Soloist:* Repeat Step II.

Step VI

Chorus: Seven cutting steps turning to left in a circle. Four three's. Repeat to right. Turn left and leave stage with entrance step, hands on shoulder of front girl.

Soloists: Seven cutting steps in a circle to left. Four three's. Repeat two more times, turn, and leave with entrance step as chorus. Hold quirts in both hands shoulder high, looking back at audience over right shoulder. Soloists are last on stage.

CONFERENCE OF DIRECTORS OF PHYSICAL EDUCATION FOR COLLEGE WOMEN

THE 1932 Conference of the National Association of Directors of Physical Education for College Women was held at Mills College in California in August. New officers of the association were elected as follows, President, Miss Ruth Elliot of Wellesley; Vice-President, Miss Edna Munroe of Indiana University; Secretary-Treasurer, Miss Florence Alden of Oregon University. The latter two will not take office until the summer of 1933, but were elected at this time as no meeting will be held before 1934. These three officers together with the presidents of the three sectional associations form the executive board.

A committee composed of Miss Mabel Lee, Chairman, Miss Florence Alden, and Miss Ruth Elliott, was appointed to formulate the conclusions of the Conference. Their report follows:

Out of the many discussions that have arisen at this conference, a definite consensus of opinion on many subjects has

IDEAL FOOTWEAR FOR HEALTH EDUCATION, RHYTHMIC INTERPRETATION AND ALL DANCING

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For over forty years Capezio has designed and lasted Dance Footwear. Capezio Slippers are noted for their durability and comfort, and they afford necessary foot protection. Every pair is fashioned to assist the wearer in acquiring agility and grace. These slippers are the finest made, and are now offered at the lowest prices in history. Capezio also offers a group of dance togs in colorful, washable fabrics.

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For tumbling, interpretative dancing and general use. Elkskin sole permits flexibility; buckle strap insures snug fit. Fawn suede, $1.35. Grey or Black suede, Black kid, $1.50. RHYTHMIK SANDAL, similar model with elastic at instep, Tan or Grey suede, $1.00 Black kid, $1.15. Postage 15c extra.

STUDENT TAP SLIPPER

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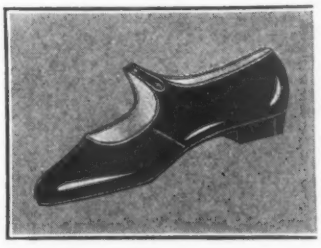

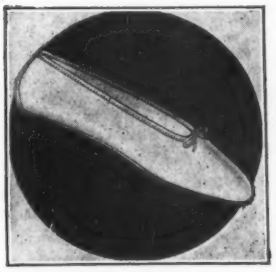

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crystallized and this committee feels that the organization should go on record as approving or recommending the following:

1. Inasmuch as the requirement in physical education is being challenged today, we recommend that this association go on record as in favor of a requirement in Physical Education for college women, pending the completion of certain studies which are now being undertaken by the National Association.

2. We further recommend that this association undertake through committee work the study of the philosophy of educational requirements in general and of physical education requirements in particular, and that this committee give immediate attention to ways and means of support and assistance to meet this challenge. It is recommended that a report of this committee be sent to all members at its earliest convenience.

3. Inasmuch as there is great duplication of content in many education courses and overemphasis in the number of hours required in education for teachers certificates, we feel a definite need for a study of the methods of procuring more balanced certification requirement and we therefore recommend that the eastern, mid-west, and western societies of this association study the problem for the coming year and make some definite report of their accomplishment in this direction at the next national meeting in 1934.

4. Inasmuch as this is an Olympic year with the contests held in our own country, there is an increased interest just now in a type of athletic participation for women to which we cannot lend approval. Therefore we recommend that this organization go on record as reaffirming its belief in the plan of athletic participation for women exemplified in the platform of the Women's Division of N.A.A.F., and that all our individual members be ever diligent in promoting and supporting high standards of athletics for women.

5. Inasmuch as the purpose of this organization is to study particularly the problems of physical education for women in institutions of higher education, we recommend that our program committees in the future continue the present policy of organizing the program entirely around our own exclusive problems, permitting much opportunity for informal discussion and exchange of ideas and experiences.

6. Inasmuch as it is a recognized educational principle to consider the accelerated and retarded student as well as the so-called normal student, we recommend that provision be made in the college program for individuals at each end of the scale of capacity and ability.

7. Inasmuch as the professional training of students is necessarily heavily weighted with professional courses to the exclusion of many desirable subjects, we recommend that our members study this problem and make every effort to progress as rapidly as possible towards the incorporation of these subjects into our training courses and further give serious thought towards the accomplishment of this and through the probable necessity of adding a fifth year to the professional training requirement, as is already done in a few of our member institutions.

8. Inasmuch as physical education is considered by many people as an unessential part of the curriculum and there is so little understanding on the part of the general public as to its educational values, we recommend that this association appoint a standing committee on Publicity whose task it shall be to inform the public of the aims, objectives, and accomplishments of our college programs for women.

9. In order to secure a sound basis of scientific facts relative to our common problems, this committee recommends that this association encourage both group and individual research and that directors secure time and funds (wherever possible) for the use of staff members who are competent to undertake research studies.

Cornering Contagion

(Continued from page 31)

desks after a case of communicable disease, but the effect of such a cleaning on the appearance of subsequent cases is negligible. It is the children who spread the disease and not the desk, blackboard, erasers, window blinds or lighting fixtures. Ordinary cleanliness in the classroom is all that is necessary. Books are not of particular importance, though perhaps the books which a sick child has been using may well be put out of circulation for two weeks or so in order that any infective organisms which may have deposited on them may have a chance to die. If a formaldehyde cabinet, such as libraries use for books, will add to the teacher's psychological comfort, there is no harm in using it, but such treatment is a matter of perfect indifference to germs. Fumigation is still held in high repute by the uninformed; popular opinion in a community may compel its employment. Experienced teachers soon recognize the advisability of meeting certain popular demands if to do so does not involve the sacrifice of principles. If fumigation is carried out in this spirit, it does no harm, but it should be clearly borne in mind that as a protection against the communicable diseases, fumigation is now regarded as a sacrifice upon the altar of ignorance, an empty ceremonial, a meaningless ritual, and a bad odor.

The teacher has a better opportunity than any other individual in the community to corner the contagious diseases and keep them cornered. They will inevitably appear in every school, but there is no reason why they should run through the school like wildfire. The firm application at the proper juncture of scientifically correct preventive measures, bolstered by good-natured but firm determination, will stop many an epidemic before it gets a good start.

Touch Football

(Continued from page 34)

7. *The ball is dead* when the player in possession of the ball is tagged by an opponent.

8. *Tackling and holding* are debarred. Penalty for team in possession of ball, loss of down; for team not in possession of ball, down does not count against opponents and play is resumed either from point of previous down if a loss has resulted, or from point to which the ball has been advanced.

9. *Position at line-up* is limited only in that no player may be ahead of his own line of scrimmage.

10. Forward passing, backward passing, and lateral passing are unlimited; but lateral or backward passes which touch the ground in front of the line of scrimmage are dead.

11. *One play after touchdown* from the 10-yard line will be allowed the scoring team for an extra point.*

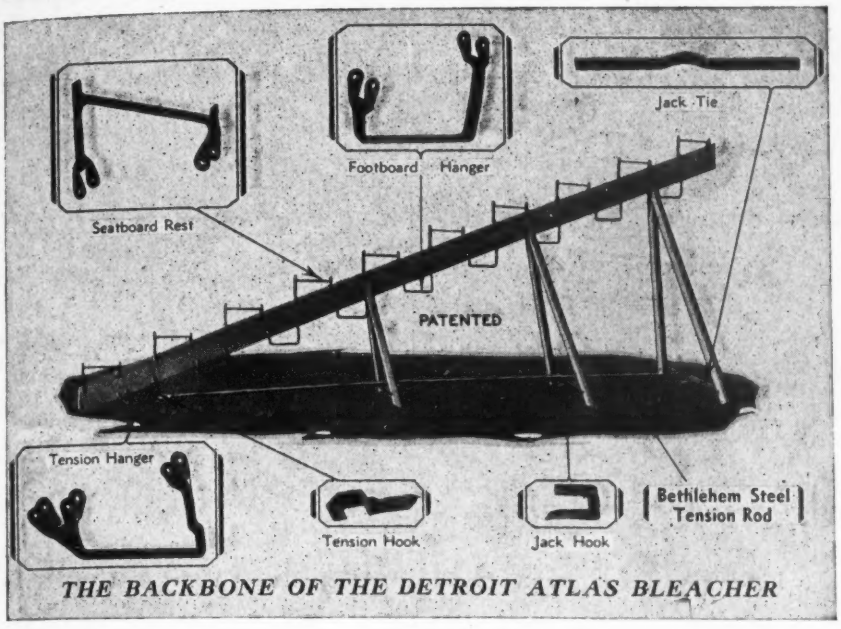
12. Kicking, except drop kick or place kick for field goal is not permitted except on announcement of kick formation, and no other play is permitted on this formation. Penalty, loss of ball on sixth down at the point of down; on any other down, loss of down and play resumed at point of previous down. The scrimmage line must not be crossed by either team until the ball is punted.

13. *Substitution* privilege is unlimited.

14. *Time of game* will be 4 periods of 12 minutes each total elapsed time.

15. *A referee and timers* will be chosen by mutual consent of the opposing teams.

*If field is long enough, goal posts may be in regular position and play after touchdown may be from usual position closer to goal line. (Our goal posts have to be on goal line.)



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Physiology

at the Service of Physical Education

Arthur H Steinhaus

Professor of Physiology and Director of the Y.M.C.A. College Laboratory for Physiologic Research in Physical Education, Chicago.

The series of which this article is one is an attempt to present and interpret to physical educators the results of some recent researches in Physiology which to the writer seem of importance to Physical Education. The articles cannot lay claim to scientific thoroughness. They must rely on their simplicity and essential accuracy to commend them to the reader. The bibliographical references should serve as starting points for any who desire to equip themselves with fuller information. (Reprints of the Steinhaus series may be secured at a nominal cost from the A. P. E. A., Box 362, Ann Arbor, Mich., or from the author.)

19. Chemical Changes in Muscle Due to Training

THE STUDIES in muscle hypertrophy reviewed in article No. 18 of this series seemed to indicate that training produced its greatest effect in the plasma or sarcoplasm of the muscle cell. Since this portion of the cell is quite homogeneous and therefore "untouchable" with the microscope, changes within it must be sought by means of chemical methods. This form of attack, though still in its infancy, has already yielded some interesting clues. It is best to consider these under specific headings.

Hemoglobin

The muscle cells contain hemoglobin, as do red corpuscles. There is evidence that a much used muscle contains larger stores of this pigment (Günther, 1921, and Whipple, 1926) than do less used muscles. The heart and jaw muscles of rabbits have more than other muscles in this animal and the leg muscles of a hunting dog contain two and one-half times as much as those of a quiet house dog. Embden and Habs (1927) were able to increase the hemoglobin content in the rabbit's biceps femoris by daily electrical stimulation through its nerve, for several weeks.

Glycogen

Since sugar is generally recognized as the muscle's main source of energy, it is natural to expect that there should be more glycogen, the storage form of sugar, in a trained muscle. The actual findings, however, do not support this view unanimously.

Two groups of workers (Embden and Habs, 1927, and Palladin and Ferdmann, 1928) studied the problem by daily stimulating, electrically, the rabbit's leg muscles on one side. After varying periods of such treatment the animals were killed and the glycogen content of the stimulated side compared with that of the other side. They conclude that already after five days of stimulation the "treated" muscles show more glycogen. At twelve days this reaches a maximum. At least five weeks after the cessation of this form of training the stimulated muscles still show an excess of glycogen. Thörner (1930) trained two dogs over a period of several months while keeping a twin brother of each dog inactive as a control. He found a higher per cent of glycogen in the muscles of the trained dogs at the end of the experiment. Procter and Best (1932) attacked the same problem in dogs taught to run on three legs. By taping one hind-leg loosely to the dogs' bodies they found little difficulty in teaching them to do this. Their results are quite surprising. During the first three weeks of training the glycogen content rose in the exercised muscles, but in dogs killed after longer periods of such training the glycogen content of the worked muscles is again less; and after thirty to forty days of training there is no difference between the amounts of this substance in the used and unused muscles. They conclude that an extra glycogen store is unnecessary in the trained state. What its significance is as a transient factor is a puzzle. Leese *et al.* (1932) found no relation between glycogen content and the work capacity of the muscles of starving rats. Their finding supports the position taken by Procter and Best.

Phosphocreatin

Phosphocreatin or phosphagen, the substance which according to our most recent theories is the immediate source of the energy of muscle contraction, was found to be markedly increased in consequence of daily electrical stimulation of rabbits' muscles (Palladin and Ferdmann, 1928, and Ferdmann and Feinschmidt, 1929). The increase did not persist for longer than three to six days after cessation of stimulation.

Potassium

Fomin (1930) found an increase in the amount of potassium following training. He devised the unique method of fastening weights to one of a dog's hind legs in order to give it extra exercise. The muscles on the weighted side yielded seventeen per cent more potassium than the same muscles from the other side. This difference did not appear until one to two days after the cessation of training and disappeared again after six days.

Capacity for Synthesis

If a freshly killed muscle is hashed and placed in a solution of 2 per cent $NaHCO_3$, 0.4 per cent glycogen, and $M_{10}NaFl$, it gives evidence of its vitality by inducing the synthesis of hexose-diphosphate (lactacidogen) in this solution. This is no doubt an enzyme action and may be taken as one measure of the muscle's ability to "recover" from work. As signs of death appear in this hash of surviving frog's muscle it gradually loses this ability. If the muscle is first fatigued and then hashed it shows less of this ability from the start. Thus fatigue and death have this loss of ability in common. The difference is that fatigue is reversible while death is not. Embden and Jost (1927) demonstrated these facts on frog's muscle while Milroy (1927) showed the same for the cat's muscle. Embden (1929) has written an interesting paper in which he likens fatigue to death. But the point of interest to us in this connection is the finding of Habs (1927) that, by training, this ability to synthesize lactacidogen is increased in the sense that when a trained muscle is exercised and hashed it continues to show this ability to synthesize for a longer time than does an untrained muscle. His conclusion therefore is that training not only postpones

(Continued on page 54)

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Physiology

(Continued from page 52)

the onset of fatigue, as is commonly recognized, but it also postpones the approach of death when this approach is measured in the manner indicated.

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Rhythm

(Continued from page 17)

RHYTHMIC training has another contribution to offer to the study of motion—its capacity to heighten pleasure in activity. Pleasure in vigorous and stimulating body activity of some kind is universal—probably due to the pleasure in merely obeying the impulse to move. Add to this fundamental pleasure the stimulating and regulating influence of rhythm and the joy in movement becomes intense.

Since rhythm is the law of our living organism, the important rôle the conscious study and experiencing of rhythm should play in motor learning becomes clear. By "conscious" is meant the developing of a keen discriminating kinesthetic sense, building from an intelligent experiencing of rhythmic values and meanings and their application to as many body skills as possible—including those necessary to daily life as well as to those more finely adjusted skills of sport techniques and dance. For the dancer also must work with some knowledge of those forces that cause and control and measure motion before she can use movement as an adequate and artistic medium of expression—sensing its effect and being able to judge the fitness of the movement to the mental images to be realized.

Such a study has the possibilities of bringing about an integration of the mental, emotional, and physical powers, and should keep alive and active the creative spirit enabling the student to invent new forms out of experienced values. From what has been said concerning the nature and perception of rhythm it becomes obvious that it is a subject worthy of serious study and one that is satisfying to the inquiring intellect. Pleasure in movement is of a higher order when motion is identified with discriminating thought and feeling.

An appreciation of rhythm in its simple beginnings can contribute to the student's realization that rhythm is the universal and controlling force back of all phenomena and that the elements of rhythm exist in all things. It can help him to tune in with the varying rhythms and stresses of life about him. Rhythm in this larger meaning is the form through which all life is experienced and expressed.

IN SUCH a general discussion of rhythm many interesting and important phases have of necessity been omitted. Such considerations as the influence of the span of attention on subjective rhythmic perception, the object phase of rhythm; a discussion of rhythm in particular and a means of analysis and synthesis: and finally a procedure of its presentation. Any one of these are subjects for lengthy discussion. For further reading besides the excellent general reading on rhythm to be found in the psychological magazines on art, esthetics, etc., and in the books written on poetry, music, and dramatic art, the following references are suggested.

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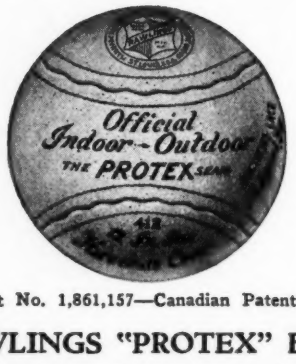

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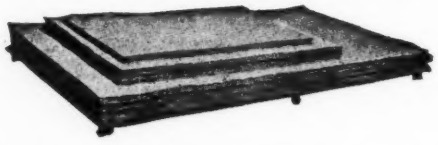

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Value of Riding

(Continued from page 29)

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Companion Tumbling

(Continued from page 27)

top man jumps lightly from the shoulders of the under stander, lands on his feet, and executes a forward roll. The bottom man rolls forward at the same time.

Another variation of the dismount from the shoulder stand is for the performers to grasp hands. The top mounter jumps forward landing on his feet on the mat and immediately executes a forward handspring between the arms of the under stander. (See Figure 17.)

Straddle Neck and Pitch Back.—After a few rapid steps forward the top mounter places his hands on the shoulders of the under stander and leaps astride his neck as indicated (Figure 19). After the balance on the shoulders is secured the top mounter throws his head backward, loosens his grasp, straightens out his back, and executes a back roll. At the same time the under stander, whose hands are underneath hips of the top man, gives a vigorous push, causing the top mounter to land in standing position facing bottom man.

Hand to Shoulder Stand.—The two performers each grasp the shoulders of the other. At a given signal the top mounter jumps astride the chest of the under stander, making certain to keep high up under his arms. Holding the top man in close to him the under stander bends forward (Figure 20), and then pulls upward and backward violently on the top mounter who is elevated to an inverted position over the shoulders of the bottom man. At the same time the top mounter "doubles up" in order to assist in attaining the position above the bottom man. Instantly upon attaining the position above the under stander, the top mounter "unfolds" and extends his legs overhead into a hand stand on the shoulders of the bottom man. Balance is maintained with the assistance of the under stander.

Pitch Back.—The top mounter takes a few walking steps forward and places his hands on the shoulders of the under stander and his foot in the cupped hands of the bottom man (Figure 21). With a springing movement, the top man leaps upward, making certain to keep in close to the body of the bottom man. The under stander assists in this upward spring by lifting vigorously but smoothly. At the point of greatest height, the top mounter throws his head backward and executes a backward somersault. The bottom man follows through with his upward lift, thus assisting in the execution of the somersault. This exercise should be practiced for height, and for a "lie out" while in the air. An assistant should be present to "spot" the top mounter while he is learning to execute the turn.

Tests and Measurements

(Continued from page 11)

Anthropometric Measurements in the Health Program

This subject presents a field in itself. Anthropometry, formerly much used by physical educators, has been almost abandoned in the field of health education. The author believes that it can be demonstrated that methods of measurement are available which will supplement the medical examination program and the health education program in ways that are exceedingly helpful and useful both to the teacher and to the pupil. These methods are mentioned briefly below.

1. Multiple regression equations for the computation of normal weight, adjusted to body type. Tentative and reasonably accurate standards are now available for all school ages.

2. Measurements of the relative amount of subcutaneous fat.

3. Measurements of the relative amount of muscular tissue. Underweight may be due either to lack of adipose tissue, to underdevelopment of muscle, or to both. In each individual case it is important to know the exact cause of underweight.

4. The developmental status of the bones. This involves an x-ray program. Due to the expense involved and the expert knowledge required, this should probably be restricted, for the present at least, to those who are suspected of physical abnormalities.

5. Indices of physical type. While the researches are as yet far from complete, there are indications that certain anthropological types are much more susceptible to certain diseases than are other types. This knowledge may be used in the advising of individuals as to a proper hygienic regimen for later life.

6. Dr. Read[23] has given us an approximation method for computing the basal metabolic rate which may be applied to reading of the pulse rate and pulse pressure. While this method is not as accurate as the standard method for testing the metabolic rate, it is an exceedingly useful method for checking up an individual suspected of having metabolic rates which depart significantly from the normal.

7. The vital capacity of the lungs. Recent research[24] has shown the uses and the limitations of this measurement. In a relatively small proportion of all pupils, it is a valuable indication of health abnormalities. It will detect defects of health in many individuals which are not discovered by the routine medical examination.

8. Certain cardio-vascular tests are more valid measurements of present *functional* health conditions than has been commonly recognized.[25,26,27] These

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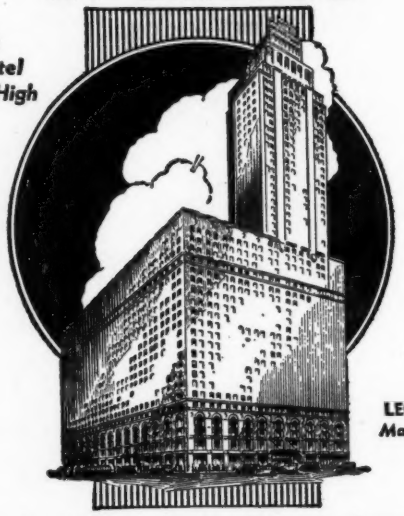

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tests are particularly useful in evaluating the relative recovery of pupils who have been out of physical education and other school activities because of illness, and of determining the athletic "condition" of team members.

In the tests detailed above it will be seen that we have omitted measurements of body mechanics. This is because we believe that most of the present standards are based upon fundamentally unsound premises. Practically none of them allow for individual hereditary, anatomical differences. The subject is mentioned here simply to indicate the need for more intelligent study of the problem.

Each of the tests and measurements mentioned or discussed above has a definite use in the educational program of physical education or of health education. We have not endeavored to discuss the uses of each of these tests in detail, as this would be impossible in the time at our disposal. Other tests may be devised to meet specific needs as they arise. It will be seen, however, that there is no small number of relatively good tests now available. We need to go more deeply into this field and to devise better, and in many cases entirely new, tests and we need to polish and refine the ones we have.

It may have been noticeable to many that the standards and tests that have been adapted to boys and men considerably outnumber those for girls and women. This is probably due to the fact that there are more men than women doing research in this field. It does not follow that the men research workers are less interested in standards for girls but that in many cases the essential data on girls and women are not readily available to such men. There is a need for more studies in the field of tests for girls. If more women do not enter this field of study, may we make bold to suggest that interested women volunteer to co-operate in the collection of data for analysis by those who are students of this subject?

The discussion of tests and measurements in this paper has been restricted to presenting a number of the more useful tests, with a brief indication of their usefulness, but with no discussion of how to integrate them into a program of physical education. No attempt has been made to give all of the tests available in the field. We hope, however, that this presentation may be helpful in pointing out one way of organizing tests into functional groups of interrelated tests, in suggesting a few sources of useful tests, and in indicating the limitations to the uses of some of the tests that are at present available.

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THE FIRST INTERNATIONAL CONGRESS ON RECREATION

THE first International Congress on Recreation was held July 23-29, the week before the Olympic Games in Los Angeles, California. Its interest, however, was not in competitive sports but rather to supply playgrounds, athletic fields, and other safe places in which people of every land may play and to give children and youths leadership that will help them to develop their bodies, minds, and characters in their playtime. The Recreation Congress stressed the principle of community responsibility applied to the uses of leisure. The achievements of athletic heroes at the Olympic stadium will inspire thousands of boys and girls to improve themselves athletically; but it will remain for such persons as those who attended the Recreation Congress to provide the playground facilities, the instruction in the schools, and the encouragement for these youngsters.

The play time at the disposal of the world will greatly increase. That is the hope held out by representatives of many different countries at the Congress, and it is also the great challenge which men and women must meet. There will be a new era in which hours of work will be much shorter and all will have leisure in which to live more fully and richly. In helping the world to organize for the wise use of its leisure, recreation leaders see as important a task as in organizing for industry.

A famous scientist, Dr. Robert A. Millikan, director of the Norman Bridge Laboratory of Physics, contributed one of the most interesting views on the coming leisure: "In this coming century we can easily grow more food than we can possibly eat, make more clothes than we can possibly wear, and build more houses than we can possibly occupy. We shall have the possibility, therefore, of beginning to develop our intellectual, moral and aesthetic natures, as the Greeks began to develop theirs when the pressure of physical existence was taken off their shoulders by their human slaves. These slaves for us are soulless, feelingless machines. Routine jobs there will be,

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of course, but there will also be leisure for something else. Routine with leisure for a rounded development makes for an ideal life."

Sir Harold Bowden, Bart., Vice-President of the Federation of British Industries, pointed out, "It is by what men do with their leisure that we must judge to what extent civilization has been a success. And the corollary to that is that nations must be judged by the degree to which the social structure they have erected provides for their peoples the opportunities for making the best possible use of their leisure time."

Our schools must prepare youth for leisure as well as work, was the message of J. L. Meriam, Professor of Education, University of California. "School teachers and officials have misused play as a means to education in American schools," he declared. "Outlines of educational theory and plans for school practice abound with play used as a means of motivating the study of the Three R's. The young should be educated in how to play, rather than play in order to become educated. Play must be regularly scheduled on the school day program. Provide a full hour or more each day and insist that this hour be devoted to wholesome fun—a high order of leisure."

That playground activities will build character and reduce juvenile crime was affirmed by speakers from several countries. Judge Robert H. Scott of the Superior Court, Los Angeles, said that an analysis of the police radio calls in that city last year showed not only that the after-school hours between three and six are most prolific of juvenile misconduct, but that the areas of misconduct appear most frequently where playground facilities are least adequate. "Games and recreation are a modern substitute for the hazards and thrills of pioneer life," he asserted. "Recreation at its best inhibits delinquency by providing healthful activities, developing social relationships, and furnishing ideals of success based on effort rather than chance."

In Germany, the cost of keeping sixteen delinquent youths in a reform school for one year would be sufficient to build a new sporting place of 2.5 acres, according to Dr. Theodor Lewald, president of the German National Commission for Physical Education. "The building of German playgrounds received its first impulse from the calamity of unemployment," he stated. "Today this symptom may be found also in many other countries. I hope to be able by supplying German calculations to strengthen the arguments by means of which every one of you might further this work in his respective home-country, serving the great ideal of the happiness of mankind."

Close-ups of recreation in many parts of the globe were presented. In Sweden, baseball is unknown and golf is played little, but tennis, football, and winter sports are popular and enthusiastically played, said J. Sigfrid Edstrom, managing director of the Swedish General Electric Company. Greece has more than thirty nautical sport associations, since her many small islands make water sports particularly attractive, it was reported. W. R. Ralston of the California Agricultural Extension Service said that the farm folks of America are learning play leadership and are finding more good times in home-made fun than they had when they could follow their city cousins in buying commercial amusement.

In Mexico, playgrounds and sports are rapidly solving the century-old riddle of warfare, declared Lamberto Alvarez-Gayou, a government director of physical education and public recreation in that country. "The sad look in Mexican boys' eyes, traditional of their Indian ancestry, is disappearing," he said. "Our boys are not playing soldier any more. With the introduction of recreation through athletics in Mexico, no longer does the younger generation run away to join the revolutionary factions bent on causing internal war. Great interest is manifested in athletics of the American type. Bullfighting and cock-fighting no longer occupy a prominent place in the recreational activities of my country."

If organized recreation is accomplishing such results for this one country, may it not have an equally happy effect on world peace? Joseph Lee of Boston, President of the National Recreation Association, summarized the meaning of the Congress as follows: "It is an interesting circumstance that such a meeting should take place at a time when the people of the world are suffering from a moral and physical depression

almost unprecedented. It is as though we all had found ourselves convicted of having made a sorry failure of our prosperity and had resolved to make a better use of it in the future. I think that such a time for meeting is auspicious. The sources of human life and happiness that we are seeking are international, older and more deeply rooted than our differences. Every nation has its songs, its games, its art, its drama, and its literature, its own approach to truth and understanding; each has its flag, the symbol of its personality; each brings its special contribution to the whole. But the muses that have whispered to us are the same. It is because of this happy combination of unity and variety that we should meet and that we shall some day form a team."

Personal Adjustment

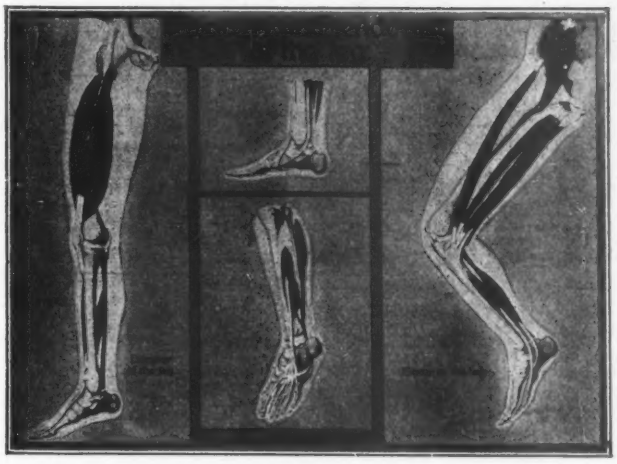
(Continued from page 22)

ple a love of adventure—the one thing which the psychiatrist finds is successful in making a person forget his fear. Probably forty per cent of the world's population are markedly apprehensive. Of these, those individuals who have had an opportunity to learn to skate, swim, dive, ski, or take part in other vitally interesting but perhaps slightly dangerous activities usually find that they can handle their fear in later life without allowing it to be a great handicap to them. On the other hand, those basically apprehensive individuals who have had no such training very frequently, when they reach adulthood or even before, become victims of severe anxiety neuroses. The physical educator has many opportunities of picking up such anxious individuals in the course of her routine work, and not only would the teacher receive much help in consulting with the psychiatrist about this problem but she *should* also refer these students to the psychiatrist for examination and treatment. In many instances this would prevent further trouble for such susceptible individuals.

Dislike for competition and fear of appearing at a disadvantage are also reasons for avoiding physical education. Young people who fear competition are greatly handicapped in making successful adaptations and, therefore, need active psychiatric treatment. It is possible for the psychiatrist to explain why such mechanisms exist, to demonstrate that these escape reactions do not constitute a satisfactory method of adjustment, and to teach such patients better methods of meeting reality.

The over-mobilized, tense individual can often be helped by physical training. Over-mobilization and tenseness are usually expressions of emotional repressions or fear of failure. Physical educators can often teach these people how to relax physically, and similarly they need to be taught how to relax psychically and spiritually. This can best be done by the psychiatrist giving them an opportunity of talking out their difficulties, helping them to reach a better understanding, and furnishing them with suggestions as to a better technique of managing their lives.

Another reason that individuals evade physical training is that they do not consider it an integral part of a college education, and in this attitude the student is often supported by the faculty and by parents. Each of these, that is the faculty as well as the parents, must



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be taught the value of physical fitness. It should be pointed out to them that, while they may not be willing to exert themselves sufficiently to attain physical fitness, it is positively immoral for them to excuse their own shortcomings by explaining to the child that such training is useless, unnecessary, or a fad. They should be willing to admit that they are too lazy to increase their own efficiency by maintaining good physical health and by insisting that they should not be taken as examples for others who really wish to get all they can out of life.

It is my experience that many members of a college faculty, although they may be mentally industrious, are decidedly lazy physically. This is true to such an extent that their efficiency is frequently impaired by their physical decrepitude. I would like to see physical educators of every university make a drive on the faculty for the purpose of improving its physical condition. If this were done, I believe that the faculty would transmit its enthusiasm in turn to the students and that the result would be of very great benefit to all concerned.

I would suggest that every student who tries to evade physical education or who seems disinterested in the subject be given a thorough physical examination to ascertain if there is any organic cause which may explain his attitude, and, secondly, if no such organic reason exists, that the requirements in regard to physical education be enforced and the student be made to take advantage of the opportunities offered him. I believe that the medical department should make a rule not to accept the recommendation of an outside physician as to whether or not a child should take part in physical activities. It should, of course, welcome the suggestion of the physician that the physical condition of the students be looked into carefully, but health departments must make their own decisions in each and every case as to whether or not an individual is able to accept physical training.

As a part of the medical examination, I would strongly advise that each of these students who show a lack of interest in physical education go through a very thorough psychiatric investigation. Where this examination shows that they need psychotherapeutic care, such treatment should be instituted. If this were done it would enable the psychiatrist to pick up many cases of maladjusted individuals who probably now slip through college without being recognized as abnormal or perhaps are not discovered until they experience some major difficulty.

In the event that both the physical examination and the psychiatric investigation are entirely negative, it would then behoove the department of physical education to closely examine its methods of education to see if its members cannot ascertain faults in their own technique which perhaps may account for the individual's lack of interest in physical education.

The Mental Hygiene Approach to Physical Education

It would seem that the purpose of education is to fit an individual to better adjust himself to his environment, and not only to give him the working tools but also the facility in using them which will make this possible. This is unquestionably the purpose of physical education. In order that this may be done most effectively it would seem that this type of education, like all others, cannot be carried out *en masse*. It must be an individual problem. First we must convince the student that the need for such training exists. This might well be done through a combination of lectures and personal interviews, with a prescription of activities worked out for each individual, a prescription which should be changed and added to as the student's physical condition and mental attitude improves.

It will not be possible to carry out such a plan as this without careful consideration of the psychic factors involved in each situation. An effort must be made not only to understand the physical but also the intellectual and emotional background of the individual student; and it is in accordance with this understanding that his first program should be worked out. As time passes, and to use a hackneyed expression, the idea is sold to the student, it then becomes possible and desirable to broaden his interest in physical activities. I hope the day will come when every boy and girl graduating from college will know how to swim, to dive, to ride, to walk, and to play golf and tennis. There are other more specialized activities which will probably have to be more or less limited in their application but are, nevertheless, very desirable training. This will produce a group of people who know how to take part in many sports and come in time to enjoy most of them. These individuals will have a broader range of interests than those who have not taken part in such activities. They will be more adventurous and, in my opinion, people who are so trained are less apt to have serious emotional disturbances, and if such disturbances do occur, it is easier for the psychiatrist to treat these individuals and to restore them once more to health.

Let us, then, if we agree as to the necessity of such a program, here declare that the physical educators and the psychiatrists are going to join forces and pool their resources, to the end that young people may go out into the world with their physical and mental equipment sufficiently developed to enable them to be useful and happy members of society.

The Play House

(Continued from page 41)

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This book is a real addition to the science of physical education. The author discusses The Evolution of Competition in Track and Field Athletics, Principles Underlying the Development of Standard Tests in Track and Field Athletics, Scoring Tables for the Measurement of Athletic Performance, The Selection of Standard Events, Athletic Classification and Handicapping by Age, Height, and Weight, Classification for Physical Activities, The Athletic Quotient, and The Administration of Tests of Athletic Ability. Numerous tables, charts, figures, a bibliography, and scoring tables add to the value of the book.

The Child and Play. James E. Rogers. (Century Co., 1932.) 205 pages. $2.00.

This book will be found useful by parents, social workers, and teachers. In our changed social order, something needs to be done in order to provide happy and beneficial play for every child. Adults need to understand that play is the serious business of childhood and that they are charged with the responsibility of providing play facilities and leadership. The author discusses the meaning of play, municipal recreation, play inside and outside of the home, the future of children's play, the school and play, and leadership. The book is written in interesting style and is filled with important items of factual information. The author writes from a background of rich personal experience.

Coaching High School Athletics. William G. Campbell, Ralph King Reed, Howard Jones. (C. C. Crawford, University of Southern California, 1932.) 207 pages. $2.00.

This book contains much helpful material for the coaching and administering of athletics in high schools. Suggestions for raising and maintaining interest, for financing the athletic department, for developing good sportsmanship, for lessening the problem of ineligibility, are made, along with many others. The references at the end of each chapter comprise a good bibliography. Also at the end of each chapter will be found a set of questions for true-false tests.

Character Education Through Physical Education. (Vol. III of *Interpretations of Physical Education*). Edited by Jay B. Nash, Ph.D. (A. S. Barnes & Co., 1932.) 315 pages. $2.00.

This is a symposium of material on character education written by leaders in the field. A definition of character is attempted from philosophical, sociological, psychological, physiological, educational, and from the mental hygienist's points of view. Next, the organic, neuro-muscular, interpretative, and emotional bases of character are discussed. Criteria are established for the evaluation of the physical education activities as they promote character formation. These criteria are then applied to the fields of athletics, dancing, Danish gymnastics, self-testing activities, and swimming. Principles of methodology in physical education are discussed and examples given of character education through the group-study plan, elementary school projects, etc. Some case studies are related and there is further discussion of character education as contributed through Camp Fire and Scouting activities, athletics, camping, and other agencies. Methods of selecting leaders are discussed as are also problems of administration of physical education for character outcomes. Valuable source material in character education will be found in the bibliography at the end of the book.

Folk Dances of Bohemia and Moravia. Anna Spacek and Neva L. Boyd.

Folk Games and Gymnastic Plays. Dagny Pedersen and Neva L. Boyd.

Folk Games of Denmark and Sweden. Dagny Pedersen and Neva L. Boyd.

Old English and American Games. Florence Brown and Neva Boyd. (H. T. FitzSimons Company) $1.25 each.

"Folk dancing is a medium of social expression and not an art intended for the entertainment of an audience." These four little books give directions and music, illustrate the costumes of the nation, and attempt to transmit some of the spirit of the people. They comprise a helpful addition to the folk dance library of the teacher in the school or on the playground.

Coaching of Boxing. John Johnstone. (Edwards Bros., 1932.) 77 pages. $2.00.

This is a compilation of notes, lectures, and demonstrations given by the author to his classes at the University of Michigan. It discusses the history of boxing, technique, coaching, boxing matches, and numerous other phases involved in the teaching of boxing. Officials and their duties are also discussed. The book will be very useful to those interested in boxing.

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